



WIKIPEDIA  
The Free Encyclopedia

# List of integer sequences

---

This is a list of notable integer sequences with links to their entries in the On-Line Encyclopedia of Integer Sequences.

## General

Name	First elements	Short description	OEIS
<u>Kolakoski sequence</u>	1, 2, 2, 1, 1, 2, 1, 2, 2, 1, ...	The $n$ th term describes the length of the $n$ th run	<a href="#">A000002</a>
<u>Euler's totient function</u> $\varphi(n)$	1, 1, 2, 2, 4, 2, 6, 4, 6, 4, ...	$\varphi(n)$ is the number of positive integers not greater than $n$ that are <u>coprime</u> with $n$ .	<a href="#">A000010</a>
<u>Lucas numbers</u> $L(n)$	2, 1, 3, 4, 7, 11, 18, 29, 47, 76, ...	$L(n) = L(n-1) + L(n-2)$ for $n \geq 2$ , with $L(0) = 2$ and $L(1) = 1$ .	<a href="#">A000032</a>
<u>Prime numbers</u> $p_n$	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, ...	The prime numbers $p_n$ , with $n \geq 1$ . A prime number is a natural number greater than 1 that is not a product of two smaller natural numbers.	<a href="#">A000040</a>
<u>Partition numbers</u> $P_n$	1, 1, 2, 3, 5, 7, 11, 15, 22, 30, 42, ...	The partition numbers, number of additive breakdowns of $n$ .	<a href="#">A000041</a>
<u>Fibonacci numbers</u> $F(n)$	0, 1, 1, 2, 3, 5, 8, 13, 21, 34, ...	$F(n) = F(n-1) + F(n-2)$ for $n \geq 2$ , with $F(0) = 0$ and $F(1) = 1$ .	<a href="#">A000045</a>
<u>Sylvester's sequence</u>	2, 3, 7, 43, 1807, 3263443, 10650056950807, 113423713055421844361000443, ...	$a(n+1) = \prod_{k=0}^n a(k) + 1 = a(n)^2 - a(n) + 1$ for $n \geq 1$ , with $a(0) = 2$ .	<a href="#">A000058</a>
<u>Tribonacci numbers</u>	0, 1, 1, 2, 4, 7, 13, 24, 44, 81, ...	$T(n) = T(n-1) + T(n-2) + T(n-3)$ for $n \geq 3$ , with $T(0) = 0$ and $T(1) = T(2) = 1$ .	<a href="#">A000073</a>
<u>Powers of 2</u>	1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, ...	Powers of 2: $2^n$ for $n \geq 0$	<a href="#">A000079</a>
<u>Polyominoes</u>	1, 1, 1, 2, 5, 12, 35, 108, 369, ...	The number of free polyominoes with $n$ cells.	<a href="#">A000105</a>
<u>Catalan numbers</u> $C_n$	1, 1, 2, 5, 14, 42, 132, 429, 1430, 4862, ...	$C_n = \frac{1}{n+1} \binom{2n}{n} = \frac{(2n)!}{(n+1)!n!} = \prod_{k=2}^n \frac{n+k}{k}$ , $n \geq 0$ .	<a href="#">A000108</a>
<u>Bell numbers</u> $B_n$	1, 1, 2, 5, 15, 52, 203, 877, 4140, 21147, ...	$B_n$ is the number of partitions of a set with $n$ elements.	<a href="#">A000110</a>
<u>Euler zigzag numbers</u> $E_n$	1, 1, 1, 2, 5, 16, 61, 272, 1385, 7936, ...	$E_n$ is the number of linear extensions of the "zig-zag" poset.	<a href="#">A000111</a>
<u>Lazy caterer's sequence</u>	1, 2, 4, 7, 11, 16, 22, 29, 37, 46, ...	The maximal number of pieces formed when slicing a pancake with $n$ cuts.	<a href="#">A000124</a>
<u>Pell numbers</u> $P_n$	0, 1, 2, 5, 12, 29, 70, 169, 408, 985, ...	$a(n) = 2a(n-1) + a(n-2)$ for $n \geq 2$ , with $a(0) = 0$ , $a(1) = 1$ .	<a href="#">A000129</a>
<u>Factorials</u> $n!$	1, 1, 2, 6, 24, 120, 720, 5040, 40320, 362880, ...	$n! = \prod_{k=1}^n k$ for $n \geq 1$ , with $0! = 1$ (empty product).	<a href="#">A000142</a>
<u>Derangements</u>	1, 0, 1, 2, 9, 44, 265, 1854, 14833, 133496, 1334961, 14684570, 176214841, ...	Number of permutations of $n$ elements with no fixed points.	<a href="#">A000166</a>
<u>Divisor function</u> $\sigma(n)$	1, 3, 4, 7, 6, 12, 8, 15, 13, 18, 12, 28, ...	$\sigma(n) := \sigma_1(n)$ is the sum of divisors of a positive integer $n$ .	<a href="#">A000203</a>
<u>Fermat numbers</u> $F_n$	3, 5, 17, 257, 65537, 4294967297, 18446744073709551617, 340282366920938463463374607431768211457, ...	$F_n = 2^{2^n} + 1$ for $n \geq 0$ .	<a href="#">A000215</a>
<u>Polytrees</u>	1, 1, 3, 8, 27, 91, 350, 1376, 5743, 24635, 108968, ...	Number of oriented trees with $n$ nodes.	<a href="#">A000238</a>
<u>Perfect numbers</u>	6, 28, 496, 8128, 33550336, 8589869056, 137438691328, 2305843008139952128, ...	$n$ is equal to the sum $s(n) = \sigma(n) - n$ of the proper divisors of $n$ .	<a href="#">A000396</a>
<u>Ramanujan tau function</u>	1, -24, 252, -1472, 4830, -6048, -16744, 84480, -113643, ...	Values of the Ramanujan tau function, $\tau(n)$ at $n = 1, 2, 3, \dots$	<a href="#">A000594</a>
<u>Landau's function</u>	1, 1, 2, 3, 4, 6, 6, 12, 15, 20, ...	The largest order of permutation of $n$ elements.	<a href="#">A000793</a>

<u>Narayana's cows</u>	1, 1, 1, 2, 3, 4, 6, 9, 13, 19, ...	The number of cows each year if each cow has one cow a year beginning its fourth year.	<a href="#">A000930</a>
<u>Padovan sequence</u>	1, 1, 1, 2, 2, 3, 4, 5, 7, 9, ...	$P(n) = P(n-2) + P(n-3)$ for $n \geq 3$ , with $P(0) = P(1) = P(2) = 1$ .	<a href="#">A000931</a>
<u>Euclid–Mullin sequence</u>	2, 3, 7, 43, 13, 53, 5, 6221671, 38709183810571, 139, ...	$a(1) = 2$ ; $a(n+1)$ is smallest prime factor of $a(1) a(2) \cdots a(n) + 1$ .	<a href="#">A000945</a>
<u>Lucky numbers</u>	1, 3, 7, 9, 13, 15, 21, 25, 31, 33, ...	A natural number in a set that is filtered by a sieve.	<a href="#">A000959</a>
<u>Prime powers</u>	2, 3, 4, 5, 7, 8, 9, 11, 13, 16, 17, 19, ...	Positive integer powers of prime numbers	<a href="#">A000961</a>
<u>Central binomial coefficients</u>	1, 2, 6, 20, 70, 252, 924, ...	$\binom{2n}{n} = \frac{(2n)!}{(n!)^2}$ for all $n \geq 0$ , numbers in the center of even rows of <u>Pascal's triangle</u>	<a href="#">A000984</a>
<u>Motzkin numbers</u>	1, 1, 2, 4, 9, 21, 51, 127, 323, 835, ...	The number of ways of drawing any number of nonintersecting chords joining $n$ (labeled) points on a circle.	<a href="#">A001006</a>
<u>Jordan–Pólya numbers</u>	1, 2, 4, 6, 8, 12, 16, 24, 32, 36, 48, 64, ...	Numbers that are the product of factorials.	<a href="#">A001013</a>
<u>Jacobsthal numbers</u>	0, 1, 1, 3, 5, 11, 21, 43, 85, 171, 341, ...	$a(n) = a(n-1) + 2a(n-2)$ for $n \geq 2$ , with $a(0) = 0$ , $a(1) = 1$ .	<a href="#">A001045</a>
<u>Sum of proper divisors <math>s(n)</math></u>	0, 1, 1, 3, 1, 6, 1, 7, 4, 8, ...	$s(n) = \sigma(n) - n$ is the sum of the proper divisors of the positive integer $n$ .	<a href="#">A001065</a>
<u>Wedderburn–Etherington numbers</u>	0, 1, 1, 1, 2, 3, 6, 11, 23, 46, ...	The number of binary rooted trees (every node has out-degree 0 or 2) with $n$ endpoints (and $2n - 1$ nodes in all).	<a href="#">A001190</a>
<u>Gould's sequence</u>	1, 2, 2, 4, 2, 4, 4, 8, 2, 4, 4, 8, 4, 8, 8, ...	Number of odd entries in row $n$ of Pascal's triangle.	<a href="#">A001316</a>
<u>Semiprimes</u>	4, 6, 9, 10, 14, 15, 21, 22, 25, 26, ...	Products of two primes, not necessarily distinct.	<a href="#">A001358</a>
<u>Golomb sequence</u>	1, 2, 2, 3, 3, 4, 4, 4, 5, 5, ...	$a(n)$ is the number of times $n$ occurs, starting with $a(1) = 1$ .	<a href="#">A001462</a>
<u>Perrin numbers <math>P_n</math></u>	3, 0, 2, 3, 2, 5, 5, 7, 10, 12, ...	$P(n) = P(n-2) + P(n-3)$ for $n \geq 3$ , with $P(0) = 3$ , $P(1) = 0$ , $P(2) = 2$ .	<a href="#">A001608</a>
<u>Sorting number</u>	0, 1, 3, 5, 8, 11, 14, 17, 21, 25, 29, 33, 37, 41, 45, 49, ...	Used in the analysis of <u>comparison sorts</u> .	<a href="#">A001855</a>
<u>Cullen numbers <math>C_n</math></u>	1, 3, 9, 25, 65, 161, 385, 897, 2049, 4609, 10241, 22529, 49153, 106497, ...	$C_n = n \cdot 2^n + 1$ , with $n \geq 0$ .	<a href="#">A002064</a>
<u>Primorials <math>p_n\#</math></u>	1, 2, 6, 30, 210, 2310, 30030, 510510, 9699690, 223092870, ...	$p_n\#$ , the product of the first $n$ primes.	<a href="#">A002110</a>
<u>Highly composite numbers</u>	1, 2, 4, 6, 12, 24, 36, 48, 60, 120, ...	A positive integer with more divisors than any smaller positive integer.	<a href="#">A002182</a>
<u>Superior highly composite numbers</u>	2, 6, 12, 60, 120, 360, 2520, 5040, 55440, 720720, ...	A positive integer $n$ for which there is an $\epsilon > 0$ such that $\frac{d(n)}{n^\epsilon} \geq \frac{d(k)}{k^\epsilon}$ for all $k > 1$ .	<a href="#">A002201</a>
<u>Pronic numbers</u>	0, 2, 6, 12, 20, 30, 42, 56, 72, 90, ...	$a(n) = 2t(n) = n(n+1)$ , with $n \geq 0$ where $t(n)$ are the triangular numbers.	<a href="#">A002378</a>
<u>Markov numbers</u>	1, 2, 5, 13, 29, 34, 89, 169, 194, ...	Positive integer solutions of $x^2 + y^2 + z^2 = 3xyz$ .	<a href="#">A002559</a>
<u>Composite numbers</u>	4, 6, 8, 9, 10, 12, 14, 15, 16, 18, ...	The numbers $n$ of the form $xy$ for $x > 1$ and $y > 1$ .	<a href="#">A002808</a>
<u>Ulam number</u>	1, 2, 3, 4, 6, 8, 11, 13, 16, 18, ...	$a(1) = 1$ ; $a(2) = 2$ ; for $n > 2$ , $a(n)$ is least number $> a(n-1)$ which is a unique sum of two distinct earlier terms; semiperfect.	<a href="#">A002858</a>
<u>Prime knots</u>	0, 0, 1, 1, 2, 3, 7, 21, 49, 165, 552, 2176, 9988, ...	The number of prime knots with $n$ crossings.	<a href="#">A002863</a>
<u>Carmichael numbers</u>	561, 1105, 1729, 2465, 2821, 6601, 8911, 10585, 15841, 29341, ...	Composite numbers $n$ such that $a^{n-1} \equiv 1 \pmod{n}$ if $a$ is coprime with $n$ .	<a href="#">A002997</a>
<u>Woodall numbers</u>	1, 7, 23, 63, 159, 383, 895, 2047, 4607, ...	$n \cdot 2^n - 1$ , with $n \geq 1$ .	<a href="#">A003261</a>

<u>Arithmetic numbers</u>	1, 3, 5, 6, 7, 11, 13, 14, 15, 17, 19, 20, 21, 22, 23, 27, ...	An integer for which the average of its positive divisors is also an integer.	<a href="#">A003601</a>
<u>Colossally abundant numbers</u>	2, 6, 12, 60, 120, 360, 2520, 5040, 55440, 720720, ...	<p>A number <math>n</math> is colossally abundant if there is an <math>\varepsilon &gt; 0</math> such that for all <math>k &gt; 1</math>,</p> $\frac{\sigma(n)}{n^{1+\varepsilon}} \geq \frac{\sigma(k)}{k^{1+\varepsilon}},$ <p>where <math>\sigma</math> denotes the sum-of-divisors function.</p>	<a href="#">A004490</a>
<u>Alcuin's sequence</u>	0, 0, 0, 1, 0, 1, 1, 2, 1, 3, 2, 4, 3, 5, 4, 7, 5, 8, 7, 10, 8, 12, 10, 14, ...	Number of triangles with integer sides and perimeter $n$ .	<a href="#">A005044</a>
<u>Deficient numbers</u>	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, ...	Positive integers $n$ such that $\sigma(n) < 2n$ .	<a href="#">A005100</a>
<u>Abundant numbers</u>	12, 18, 20, 24, 30, 36, 40, 42, 48, 54, ...	Positive integers $n$ such that $\sigma(n) > 2n$ .	<a href="#">A005101</a>
<u>Untouchable numbers</u>	2, 5, 52, 88, 96, 120, 124, 146, 162, 188, ...	Cannot be expressed as the sum of all the proper divisors of any positive integer.	<a href="#">A005114</a>
<u>Recamán's sequence</u>	0, 1, 3, 6, 2, 7, 13, 20, 12, 21, 11, 22, 10, 23, 9, 24, 8, 25, 43, 62, ...	"subtract if possible, otherwise add": $a(0) = 0$ ; for $n > 0$ , $a(n) = a(n-1) - n$ if that number is positive and not already in the sequence, otherwise $a(n) = a(n-1) + n$ , whether or not that number is already in the sequence.	<a href="#">A005132</a>
<u>Look-and-say sequence</u>	1, 11, 21, 1211, 111221, 312211, 13112221, 1113213211, 31131211131221, 13211311123113112211, ...	A = 'frequency' followed by 'digit'-indication.	<a href="#">A005150</a>
<u>Practical numbers</u>	1, 2, 4, 6, 8, 12, 16, 18, 20, 24, 28, 30, 32, 36, 40, ...	All smaller positive integers can be represented as sums of distinct factors of the number.	<a href="#">A005153</a>
<u>Alternating factorial</u>	1, 1, 5, 19, 101, 619, 4421, 35899, 326981, 3301819, 36614981, 442386619, 5784634181, 81393657019, ...	$\sum_{k=0}^{n-1} (-1)^k (n-k)!$	<a href="#">A005165</a>
<u>Fortunate numbers</u>	3, 5, 7, 13, 23, 17, 19, 23, 37, 61, ...	The smallest integer $m > 1$ such that $p_n\# + m$ is a prime number, where the primorial $p_n\#$ is the product of the first $n$ prime numbers.	<a href="#">A005235</a>
<u>Semiperfect numbers</u>	6, 12, 18, 20, 24, 28, 30, 36, 40, 42, ...	A natural number $n$ that is equal to the sum of all or some of its proper divisors.	<a href="#">A005835</a>
<u>Magic constants</u>	15, 34, 65, 111, 175, 260, 369, 505, 671, 870, 1105, 1379, 1695, 2056, ...	Sum of numbers in any row, column, or diagonal of a magic square of order $n \geq 3$ .	<a href="#">A006003</a>
<u>Weird numbers</u>	70, 836, 4030, 5830, 7192, 7912, 9272, 10430, 10570, 10792, ...	A natural number that is abundant but not semiperfect.	<a href="#">A006037</a>
<u>Farey sequence numerators</u>	0, 1, 0, 1, 1, 0, 1, 1, 2, 1, ...		<a href="#">A006842</a>
<u>Farey sequence denominators</u>	1, 1, 1, 2, 1, 1, 3, 2, 3, 1, ...		<a href="#">A006843</a>
<u>Euclid numbers</u>	2, 3, 7, 31, 211, 2311, 30031, 510511, 9699691, 223092871, ...	$p_n\# + 1$ , i.e. 1 + product of first $n$ consecutive primes.	<a href="#">A006862</a>
<u>Kaprekar numbers</u>	1, 9, 45, 55, 99, 297, 703, 999, 2223, 2728, ...	$X^2 = Ab^n + B$ , where $0 < B < b^n$ and $X = A + B$ .	<a href="#">A006886</a>
<u>Sphenic numbers</u>	30, 42, 66, 70, 78, 102, 105, 110, 114, 130, ...	Products of 3 distinct primes.	<a href="#">A007304</a>
<u>Giuga numbers</u>	30, 858, 1722, 66198, 2214408306, ...	Composite numbers so that for each of its distinct prime factors $p_i$ we have $p_i^2 \mid (n - p_i)$ .	<a href="#">A007850</a>
<u>Radical of an integer</u>	1, 2, 3, 2, 5, 6, 7, 2, 3, 10, ...	The radical of a positive integer $n$ is the product of the distinct prime numbers dividing $n$ .	<a href="#">A007947</a>
<u>Thue–Morse sequence</u>	0, 1, 1, 0, 1, 0, 0, 1, 1, 0, ...		<a href="#">A010060</a>
<u>Regular paperfolding sequence</u>	1, 1, 0, 1, 1, 0, 0, 1, 1, 1, ...	At each stage an alternating sequence of 1s and 0s is inserted between the terms of the previous sequence.	<a href="#">A014577</a>

<u>Blum integers</u>	21, 33, 57, 69, 77, 93, 129, 133, 141, 161, 177, ...	Numbers of the form $pq$ where $p$ and $q$ are distinct primes congruent to 3 (mod 4).	<a href="#">A016105</a>
<u>Magic numbers</u>	2, 8, 20, 28, 50, 82, 126, ...	A number of nucleons (either protons or neutrons) such that they are arranged into complete shells within the atomic nucleus.	<a href="#">A018226</a>
<u>Superperfect numbers</u>	2, 4, 16, 64, 4096, 65536, 262144, 1073741824, 1152921504606846976, 309485009821345068724781056, ...	Positive integers $n$ for which $\sigma^2(n) = \sigma(\sigma(n)) = 2n$ .	<a href="#">A019279</a>
<u>Bernoulli numbers <math>B_n</math></u>	1, −1, 1, 0, −1, 0, 1, 0, −1, 0, 5, 0, −691, 0, 7, 0, −3617, 0, 43867, 0, ...		<a href="#">A027641</a>
<u>Hyperperfect numbers</u>	6, 21, 28, 301, 325, 496, 697, ...	$k$ -hyperperfect numbers, i.e. $n$ for which the equality $n = 1 + k(\sigma(n) - n - 1)$ holds.	<a href="#">A034897</a>
<u>Achilles numbers</u>	72, 108, 200, 288, 392, 432, 500, 648, 675, 800, ...	Positive integers which are powerful but imperfect.	<a href="#">A052486</a>
<u>Primary pseudoperfect numbers</u>	2, 6, 42, 1806, 47058, 2214502422, 52495396602, ...	Satisfies a certain <u>Egyptian fraction</u> .	<a href="#">A054377</a>
<u>Erdős–Woods numbers</u>	16, 22, 34, 36, 46, 56, 64, 66, 70, 76, 78, 86, 88, ...	The length of an interval of consecutive integers with property that every element has a factor in common with one of the endpoints.	<a href="#">A059756</a>
<u>Sierpinski numbers</u>	78557, 271129, 271577, 322523, 327739, 482719, 575041, 603713, 903983, 934909, ...	Odd $k$ for which $\{k \cdot 2^n + 1 : n \in \mathbb{N}\}$ consists only of composite numbers.	<a href="#">A076336</a>
<u>Riesel numbers</u>	509203, 762701, 777149, 790841, 992077, ...	Odd $k$ for which $\{k \cdot 2^n - 1 : n \in \mathbb{N}\}$ consists only of composite numbers.	<a href="#">A076337</a>
<u>Baum–Sweet sequence</u>	1, 1, 0, 1, 1, 0, 0, 1, 0, 1, ...	$a(n) = 1$ if the binary representation of $n$ contains no block of consecutive zeros of odd length; otherwise $a(n) = 0$ .	<a href="#">A086747</a>
<u>Gijswijt's sequence</u>	1, 1, 2, 1, 1, 2, 2, 2, 3, 1, ...	The $n$ th term counts the maximal number of repeated blocks at the end of the subsequence from 1 to $n-1$	<a href="#">A090822</a>
<u>Carol numbers</u>	−1, 7, 47, 223, 959, 3967, 16127, 65023, 261119, 1046527, ...	$a(n) = (2^n - 1)^2 - 2$ .	<a href="#">A093112</a>
<u>Juggler sequence</u>	0, 1, 1, 5, 2, 11, 2, 18, 2, 27, ...	If $n \equiv 0 \pmod{2}$ then $\lfloor \sqrt{n} \rfloor$ else $\lfloor n^{3/2} \rfloor$ .	<a href="#">A094683</a>
<u>Highly totient numbers</u>	1, 2, 4, 8, 12, 24, 48, 72, 144, 240, ...	Each number $k$ on this list has more solutions to the equation $\varphi(x) = k$ than any preceding $k$ .	<a href="#">A097942</a>
<u>Euler numbers</u>	1, 0, −1, 0, 5, 0, −61, 0, 1385, 0, ...	$\frac{1}{\cosh t} = \frac{2}{e^t + e^{-t}} = \sum_{n=0}^{\infty} \frac{E_n}{n!} \cdot t^n.$	<a href="#">A122045</a>
<u>Polite numbers</u>	3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, ...	A positive integer that can be written as the sum of two or more consecutive positive integers.	<a href="#">A138591</a>
<u>Erdős–Nicolas numbers</u>	24, 2016, 8190, 42336, 45864, 392448, 714240, 1571328, ...	A number $n$ such that there exists another number $m$ and $\sum_{d n, d \leq m} d = n$ .	<a href="#">A194472</a>
<u>Solution to Stepping Stone Puzzle</u>	1, 16, 28, 38, 49, 60, ...	The maximal value $a(n)$ of the stepping stone puzzle	<a href="#">A337663</a>

## Figurate numbers

Name	First elements	Short description	OEIS
<u>Natural numbers</u>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, ...	The natural numbers (positive integers) $n \in \mathbb{N}$ .	<a href="#">A000027</a>
<u>Triangular numbers <math>t(n)</math></u>	0, 1, 3, 6, 10, 15, 21, 28, 36, 45, ...	$t(n) = C(n+1, 2) = \frac{n(n+1)}{2} = 1 + 2 + \dots + n$ for $n \geq 1$ , with $t(0) = 0$ (empty sum).	<a href="#">A000217</a>
<u>Square numbers <math>n^2</math></u>	0, 1, 4, 9, 16, 25, 36, 49, 64, 81, ...	$n^2 = n \times n$	<a href="#">A000290</a>
<u>Tetrahedral numbers <math>T(n)</math></u>	0, 1, 4, 10, 20, 35, 56, 84, 120, 165, ...	$T(n)$ is the sum of the first $n$ triangular numbers, with $T(0) = 0$ (empty sum).	<a href="#">A000292</a>

<u>Square pyramidal numbers</u>	0, 1, 5, 14, 30, 55, 91, 140, 204, 285, ...	$\frac{n(n+1)(2n+1)}{6}$ : The number of stacked spheres in a pyramid with a square base.	<a href="#">A000330</a>
<u>Cube numbers</u> $n^3$	0, 1, 8, 27, 64, 125, 216, 343, 512, 729, ...	$n^3 = n \times n \times n$	<a href="#">A000578</a>
<u>Fifth powers</u>	0, 1, 32, 243, 1024, 3125, 7776, 16807, 32768, 59049, 100000, ...	$n^5$	<a href="#">A000584</a>
<u>Star numbers</u>	1, 13, 37, 73, 121, 181, 253, 337, 433, 541, 661, 793, 937, ...	$S_n = 6n(n-1) + 1$ .	<a href="#">A003154</a>
<u>Stella octangula numbers</u>	0, 1, 14, 51, 124, 245, 426, 679, 1016, 1449, 1990, 2651, 3444, 4381, ...	Stella octangula numbers: $n(2n^2 - 1)$ , with $n \geq 0$ .	<a href="#">A007588</a>

## Types of primes

Name	First elements	Short description	OEIS
<u>Mersenne prime exponents</u>	2, 3, 5, 7, 13, 17, 19, 31, 61, 89, ...	Primes $p$ such that $2^p - 1$ is prime.	<a href="#">A000043</a>
<u>Mersenne primes</u>	3, 7, 31, 127, 8191, 131071, 524287, 2147483647, 2305843009213693951, 618970019642690137449562111, ...	$2^p - 1$ is prime, where $p$ is a prime.	<a href="#">A000668</a>
<u>Wagstaff primes</u>	3, 11, 43, 683, 2731, 43691, ...	A prime number $p$ of the form $p = \frac{2^q + 1}{3}$ where $q$ is an odd prime.	<a href="#">A000979</a>
<u>Wieferich primes</u>	1093, 3511	Primes $p$ satisfying $2^{p-1} \equiv 1 \pmod{p^2}$ .	<a href="#">A001220</a>
<u>Sophie Germain primes</u>	2, 3, 5, 11, 23, 29, 41, 53, 83, 89, ...	A prime number $p$ such that $2p + 1$ is also prime.	<a href="#">A005384</a>
<u>Wilson primes</u>	5, 13, 563	Primes $p$ satisfying $(p-1)! \equiv -1 \pmod{p^2}$ .	<a href="#">A007540</a>
<u>Happy numbers</u>	1, 7, 10, 13, 19, 23, 28, 31, 32, 44, ...	The numbers whose trajectory under iteration of sum of squares of digits map includes 1.	<a href="#">A007770</a>
<u>Factorial primes</u>	2, 3, 5, 7, 23, 719, 5039, 39916801, ...	A prime number that is one less or one more than a <u>factorial</u> (all factorials $> 1$ are even).	<a href="#">A088054</a>
<u>Wolstenholme primes</u>	16843, 2124679	Primes $p$ satisfying $\binom{2p-1}{p-1} \equiv 1 \pmod{p^4}$ .	<a href="#">A088164</a>
<u>Ramanujan primes</u>	2, 11, 17, 29, 41, 47, 59, 67, ...	The $n^{\text{th}}$ Ramanujan prime is the least integer $R_n$ for which $\pi(x) - \pi(x/2) \geq n$ , for all $x \geq R_n$ .	<a href="#">A104272</a>

## Base-dependent

Name	First elements	Short description	OEIS
<u>Aronson's sequence</u>	1, 4, 11, 16, 24, 29, 33, 35, 39, 45, ...	"t" is the first, fourth, eleventh, ... letter in this sentence, not counting spaces or commas.	<a href="#">A005224</a>
<u>Palindromic numbers</u>	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 22, 33, 44, 55, 66, 77, 88, 99, 101, 111, 121, ...	A number that remains the same when its digits are reversed.	<a href="#">A002113</a>
<u>Permutable primes</u>	2, 3, 5, 7, 11, 13, 17, 31, 37, 71, ...	The numbers for which every permutation of digits is a prime.	<a href="#">A003459</a>
<u>Harshad numbers in base 10</u>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, ...	A Harshad number in base 10 is an integer that is divisible by the sum of its digits (when written in base 10).	<a href="#">A005349</a>
<u>Factorions</u>	1, 2, 145, 40585, ...	A natural number that equals the sum of the factorials of its decimal digits.	<a href="#">A014080</a>
<u>Circular primes</u>	2, 3, 5, 7, 11, 13, 17, 37, 79, 113, ...	The numbers which remain prime under cyclic shifts of digits.	<a href="#">A016114</a>

<u>Home prime</u>	1, 2, 3, 211, 5, 23, 7, 3331113965338635107, 311, 773, ...	For $n \geq 2$ , $a(n)$ is the prime that is finally reached when you start with $n$ , concatenate its prime factors (A037276) and repeat until a prime is reached; $a(n) = -1$ if no prime is ever reached.	<u>A037274</u>
<u>Undulating numbers</u>	101, 121, 131, 141, 151, 161, 171, 181, 191, 202, ...	A number that has the digit form <i>ababab</i> .	<u>A046075</u>
<u>Equidigital numbers</u>	1, 2, 3, 5, 7, 10, 11, 13, 14, 15, 16, 17, 19, 21, 23, 25, 27, 29, 31, 32, 35, 37, 41, 43, 47, 49, 53, 59, 61, 64, ...	A number that has the same number of digits as the number of digits in its prime factorization, including exponents but excluding exponents equal to 1.	<u>A046758</u>
<u>Extravagant numbers</u>	4, 6, 8, 9, 12, 18, 20, 22, 24, 26, 28, 30, 33, 34, 36, 38, ...	A number that has fewer digits than the number of digits in its prime factorization (including exponents).	<u>A046760</u>
<u>Pandigital numbers</u>	1023456789, 1023456798, 1023456879, 1023456897, 1023456978, 1023456987, 1023457689, 1023457698, 1023457869, 1023457896, ...	Numbers containing the digits 0–9 such that each digit appears exactly once.	<u>A050278</u>

## References

---

- OEIS core sequences ([http://oeis.org/wiki/Index\\_to\\_OEIS:\\_Section\\_Cor#core](http://oeis.org/wiki/Index_to_OEIS:_Section_Cor#core))

## External links

---

- Index to OEIS ([http://oeis.org/wiki/Index\\_to\\_OEIS](http://oeis.org/wiki/Index_to_OEIS))
- 

Retrieved from "[https://en.wikipedia.org/w/index.php?title=List\\_of\\_integer\\_sequences&oldid=1265343074](https://en.wikipedia.org/w/index.php?title=List_of_integer_sequences&oldid=1265343074)"