

PROJECT EULER - PROBLEM ARCHIVES - SOLUTIONS													
- by Melwyn Francis Carlo													
Sr. No.	Problem Title	Completion Status			Approx. Lines of Code			Execution Time (in ms)			Execution Time (in seconds)		
		C	Fortran	Ada	C	Fortran	Ada	C	Fortran	Ada	C	Fortran	Ada
1	Multiples of 3 and 5	•	•	•	20	20	20	0.002	0.002	0.003	0	0	0
2	Even Fibonacci numbers	•	•	•	20	30	30	0.009	0.003	0.006	0	0	0
3	Largest prime factor	•	•	•	40	30	50	10.094	26.117	12.203	0	0	0
4	Largest palindrome product	•	•	•	50	50	70	0.256	0.695	0.07	0	0	0
5	Smallest multiple	•	•	•	20	30	30	41.799	91.287	106.856	0	0.1	0.1
6	Sum square difference	•	•	•	20	20	20	0.002	0.003	0	0	0	0
7	10001st prime	•	•	•	40	40	60	7.179	6.433	2.658	0	0	0
8	Largest product in a series	•	•	•	50	50	60	0.01	6.04	0.198	0	0	0
9	Special Pythagorean triplet	•	•	•	30	30	40	0.004	0.003	0.012	0	0	0
10	Summation of primes	•	•	•	30	30	50	48.868	29.838	9.789	0	0	0
11	Largest product in a grid	•	•	•	110	130	160	0.014	0.01	0.012	0	0	0
12	Highly divisible triangular number	•	•	•	90	90	100	546.795	2291.37	1062.59	0.5	2.3	1.1
13	Large sum	•	•	•	160	160	180	0.058	0.635	0.045	0	0	0
14	Longest Collatz sequence	•	•	•	50	50	50	277.179	285.833	328.179	0.3	0.3	0.3
15	Lattice paths	•	•	•	20	20	20	0.003	0.003	0.001	0	0	0
16	Power digit sum	•	•	•	60	70	90	8.151	26.974	8.099	0	0	0
17	Number letter counts	•	•	•	60	70	80	0.04	0.041	0.112	0	0	0
18	Maximum path sum I	•	•	•	40	40	50	0.004	0.003	0.001	0	0	0
19	Counting Sundays	•	•	•	30	40	50	0.004	0.007	0.085	0	0	0
20	Factorial digit sum	•	•	•	60	70	110	2.758	10.47	3.342	0	0	0
21	Amicable numbers	•	•	•	40	50	60	207.97	206.343	221.317	0.2	0.2	0.2
22	Names scores	•	•	•	80	-	-	399.622	-	-	0.4	-	-

23	Non-abundant sums	•	•	•	50	60	70	5866.56	5711.1	14443.3	5.9	5.7	14.4
24	Lexicographic permutations	•	•	•	40	50	60	0.003	0.007	0.002	0	0	0
25	1000-digit Fibonacci number	•	•	•	80	-	-	58.721	-	-	0.1	-	-
26	Reciprocal cycles	•	•	•	90	-	-	268.322	-	-	0.3	-	-
27	Quadratic primes	•	•	•	80	-	-	52.34	-	-	0.1	-	-
28	Number spiral diagonals	•	•	•	60	60	70	3.647	5.13	4.432	0	0	0
29	Distinct powers	•	•	•	120	-	-	6945.38	-	-	6.9	-	-
30	Digit fifth powers	•	•	•	30	30	40	434.339	967.498	409.844	0.4	1	0.4
31	Coin sums	•	•	•	30	30	40	1414.75	4773.04	4220.23	1.4	4.8	4.2
32	Pandigital products	•	•	•	160	-	-	19.596	-	-	0	-	-
33	Digit cancelling fractions	•	•	•	90	120	120	0.608	4.121	0.46	0	0	0
34	Digit factorials	•	•	•	30	40	40	20.991	92.962	12.032	0	0.1	0
35	Circular primes	•			100	-	-	8858.9	-	-	8.9	-	-
36	Double-base palindromes	•	•	•	70	-	-	57.511	-	-	0.1	-	-
37	Truncatable primes	•			100	-	-	159.942	-	-	0.2	-	-
38	Pandigital multiples	•			90	-	-	2.733	-	-	0	-	-
39	Integer right triangles	•	•	•	40	40	50	0.247	0.992	18.577	0	0	0
40	Champernowne's constant	•	•	•	40	50	50	0.03	0.039	0.009	0	0	0
41	Pandigital prime	•	•	•	50	60	60	43.406	843.878	103.193	0	0.8	0.1
42	Coded triangle numbers	•	•	•	60	60	70	0.205	4.283	0.708	0	0	0
43	Sub-string divisibility	•	•	•	160	170	190	43.038	89.389	63.679	0	0.1	0.1
44	Pentagon numbers	•	•	•	50	50	60	100.146	84.28	827.914	0.1	0.1	0.8
45	Triangular, pentagonal, and hexagonal	•	•	•	40	40	60	0.417	0.424	49.214	0	0	0
46	Goldbach's other conjecture	•	•	•	60	70	90	3.46	5.447	7.207	0	0	0
47	Distinct primes factors	•	•	•	70	70	100	729.111	740.497	853.672	0.7	0.7	0.9
48	Self powers	•	•	•	80	80	110	745.775	4778.38	870.298	0.7	4.8	0.9
49	Prime permutations	•	•	•	120	130	170	99.407	404.574	171.42	0.1	0.4	0.2

50	Consecutive prime sum	•	•	•	70	80	100	3518.27	3550.65	19926	3.5	3.6	19.9
51	Prime digit replacements												
52	Permuted multiples	•	•	•									
53	Combinatoric selections	•											
54	Poker hands												
55	Lychrel numbers												
56	Powerful digit sum	•											
57	Square root convergents	•											
58	Spiral primes	•											
59	XOR decryption	•											
60	Prime pair sets												
61	Cyclical figurate numbers												
62	Cubic permutations												
63	Powerful digit counts	•											
64	Odd period square roots												
65	Convergents of e												
66	Diophantine equation												
67	Maximum path sum II	•	•	•									
68	Magic 5-gon ring												
69	Totient maximum												
70	Totient permutation												
71	Ordered fractions												
72	Counting fractions												
73	Counting fractions in a range												
74	Digit factorial chains												
75	Singular integer right triangles	•											
76	Counting summations												

77	Prime summations												
78	Coin partitions												
79	Passcode derivation	•	•	•									
80	Square root digital expansion	•											
81	Path sum: two ways												
82	Path sum: three ways												
83	Path sum: four ways												
84	Monopoly odds												
85	Counting rectangles												
86	Cuboid route												
87	Prime power triples												
88	Product-sum numbers												
89	Roman numerals												
90	Cube digit pairs												
91	Right triangles with integer coordinates	•											
92	Square digit chains	•											
93	Arithmetic expressions	•											
94	Almost equilateral triangles	•											
95	Amicable chains												
96	Su Doku	•	•	•	160	160	190	184.084	187.943	206.451	0.2	0.2	0.2
97	Large non-Mersenne prime	•											
98	Anagramic squares												
99	Largest exponential												
100	Arranged probability												
101	Optimum polynomial												
102	Triangle containment												
103	Special subset sums: optimum												

104	Pandigital Fibonacci ends											
105	Special subset sums: testing											
106	Special subset sums: meta-testing											
107	Minimal network											
108	Diophantine reciprocals I											
109	Darts											
110	Diophantine reciprocals II											
111	Primes with runs											
112	Bouncy numbers											
113	Non-bouncy numbers											
114	Counting block combinations I											
115	Counting block combinations II											
116	Red, green or blue tiles											
117	Red, green, and blue tiles											
118	Pandigital prime sets											
119	Digit power sum											
120	Square remainders											
121	Disc game prize fund											
122	Efficient exponentiation											
123	Prime square remainders											
124	Ordered radicals											
125	Palindromic sums											
126	Cuboid layers											
127	abc-hits											
128	Hexagonal tile differences											
129	Repunit divisibility											
130	Composites with prime repunit property											

131	Prime cube partnership											
132	Large repunit factors											
133	Repunit nonfactors											
134	Prime pair connection											
135	Same differences											
136	Singleton difference											
137	Fibonacci golden nuggets											
138	Special isosceles triangles											
139	Pythagorean tiles											
140	Modified Fibonacci golden nuggets											
141	Investigating progressive numbers, n, which are also square											
142	Perfect Square Collection											
143	Investigating the Torricelli point of a triangle											
144	Investigating multiple reflections of a laser beam											
145	How many reversible numbers are there below one-billion?											
146	Investigating a Prime Pattern											
147	Rectangles in cross-hatched grids											
148	Exploring Pascal's triangle											
149	Searching for a maximum-sum subsequence											
150	Searching a triangular array for a sub-triangle having minimum-sum											
151	Paper sheets of standard sizes: an expected-value problem											
152	Writing 1/2 as a sum of inverse squares											
153	Investigating Gaussian Integers											
154	Exploring Pascal's pyramid											
155	Counting Capacitor Circuits											

156	Counting Digits											
157	Solving the diophantine equation $\frac{1}{a} + \frac{1}{b} = \frac{p}{10^n}$											
158	Exploring strings for which only one character comes lexicographically after its neighbour to the left											
159	Digital root sums of factorisations											
160	Factorial trailing digits											
161	Triominoes											
162	Hexadecimal numbers											
163	Cross-hatcheded triangles											
164	Numbers for which no three consecutive digits have a sum greater than a given value											
165	Intersections											
166	Criss Cross											
167	Investigating Ulam sequences											
168	Number Rotations											
169	Exploring the number of different ways a number can be expressed as a sum of powers of 2											
170	Find the largest 0 to 9 pandigital that can be formed by concatenating products											
171	Finding numbers for which the sum of the squares of the digits is a square											
172	Investigating numbers with few repeated digits											
173	Using up to one million tiles how many different 'hollow' square laminae can be formed?											
174	Counting the number of 'hollow' square laminae that can form one, two, three, ... distinct arrangements											
175	Fractions involving the number of different ways a number can be expressed as a sum of powers of 2											
176	Right-angled triangles that share a cathetus											
177	Integer angled Quadrilaterals											

178	Step Numbers											
179	Consecutive positive divisors											
180	Rational zeros of a function of three variables											
181	Investigating in how many ways objects of two different colours can be grouped											
182	RSA encryption											
183	Maximum product of parts											
184	Triangles containing the origin											
185	Number Mind											
186	Connectedness of a network											
187	Semiprimes											
188	The hyperexponentiation of a number											
189	Tri-colouring a triangular grid											
190	Maximising a weighted product											
191	Prize Strings											
192	Best Approximations											
193	Squarefree Numbers											
194	Coloured Configurations											
195	Inscribed circles of triangles with one angle of 60 degrees											
196	Prime triplets											
197	Investigating the behaviour of a recursively defined sequence											
198	Ambiguous Numbers											
199	Iterative Circle Packing											
200	Find the 200th prime-proof sqube containing the contiguous sub-string '200'											
201	Subsets with a unique sum											
202	Laserbeam											

203	Squarefree Binomial Coefficients												
204	Generalised Hamming Numbers												
205	Dice Game												
206	Concealed Square												
207	Integer partition equations												
208	Robot Walks												
209	Circular Logic												
210	Obtuse Angled Triangles												
211	Divisor Square Sum												
212	Combined Volume of Cuboids												
213	Flea Circus												
214	Totient Chains												
215	Crack-free Walls												
216	Investigating the primality of numbers of the form $2n^2-1$												
217	Balanced Numbers												
218	Perfect right-angled triangles												
219	Skew-cost coding												
220	Heighway Dragon												
221	Alexandrian Integers												
222	Sphere Packing												
223	Almost right-angled triangles I												
224	Almost right-angled triangles II												
225	Tribonacci non-divisors												
226	A Scoop of Blancmange												
227	The Chase												
228	Minkowski Sums												

229	Four Representations using Squares											
230	Fibonacci Words											
231	The prime factorisation of binomial coefficients											
232	The Race											
233	Lattice points on a circle											
234	Semidivisible numbers											
235	An Arithmetic Geometric sequence											
236	Luxury Hampers											
237	Tours on a 4 x n playing board											
238	Infinite string tour											
239	Twenty-two Foolish Primes											
240	Top Dice											
241	Perfection Quotients											
242	Odd Triplets											
243	Resilience											
244	Sliders											
245	Coresilience											
246	Tangents to an ellipse											
247	Squares under a hyperbola											
248	Numbers for which Euler's totient function equals 13!											
249	Prime Subset Sums											
250	250250											
251	Cardano Triplets											
252	Convex Holes											
253	Tidying up											
254	Sums of Digit Factorials											

255	Rounded Square Roots											
256	Tatami-Free Rooms											
257	Angular Bisectors											
258	A lagged Fibonacci sequence											
259	Reachable Numbers											
260	Stone Game											
261	Pivotal Square Sums											
262	Mountain Range											
263	An engineers' dream come true											
264	Triangle Centres											
265	Binary Circles											
266	Pseudo Square Root											
267	Billionaire											
268	Counting numbers with at least four distinct prime factors less than 100											
269	Polynomials with at least one integer root											
270	Cutting Squares											
271	Modular Cubes, part 1											
272	Modular Cubes, part 2											
273	Sum of Squares											
274	Divisibility Multipliers											
275	Balanced Sculptures											
276	Primitive Triangles											
277	A Modified Collatz sequence											
278	Linear Combinations of Semiprimes											
279	Triangles with integral sides and an integral angle											
280	Ant and seeds											

281	Pizza Toppings											
282	The Ackermann function											
283	Integer sided triangles for which the area/perimeter ratio is integral											
284	Steady Squares											
285	Pythagorean odds											
286	Scoring probabilities											
287	Quadtree encoding (a simple compression algorithm)											
288	An enormous factorial											
289	Eulerian Cycles											
290	Digital Signature											
291	Panaitopol Primes											
292	Pythagorean Polygons											
293	Pseudo-Fortunate Numbers											
294	Sum of digits - experience #23											
295	Lenticular holes											
296	Angular Bisector and Tangent											
297	Zeckendorf Representation											
298	Selective Amnesia											
299	Three similar triangles											
300	Protein folding											
301	Nim											
302	Strong Achilles Numbers											
303	Multiples with small digits											
304	Primonacci											
305	Reflexive Position											
306	Paper-strip Game											

307	Chip Defects											
308	An amazing Prime-generating Automaton											
309	Integer Ladders											
310	Nim Square											
311	Biclinic Integral Quadrilaterals											
312	Cyclic paths on Sierpiński graphs											
313	Sliding game											
314	The Mouse on the Moon											
315	Digital root clocks											
316	Numbers in decimal expansions											
317	Firecracker											
318	2011 nines											
319	Bounded Sequences											
320	Factorials divisible by a huge integer											
321	Swapping Counters											
322	Binomial coefficients divisible by 10											
323	Bitwise-OR operations on random integers											
324	Building a tower											
325	Stone Game II											
326	Modulo Summations											
327	Rooms of Doom											
328	Lowest-cost Search											
329	Prime Frog											
330	Euler's Number											
331	Cross flips											
332	Spherical triangles											
333	Special partitions											

334	Spilling the beans											
335	Gathering the beans											
336	Maximix Arrangements											
337	Totient Stairstep Sequences											
338	Cutting Rectangular Grid Paper											
339	Peredur fab Efracwg											
340	Crazy Function											
341	Golomb's self-describing sequence											
342	The totient of a square is a cube											
343	Fractional Sequences											
344	Silver dollar game											
345	Matrix Sum											
346	Strong Repunits											
347	Largest integer divisible by two primes											
348	Sum of a square and a cube											
349	Langton's ant											
350	Constraining the least greatest and the greatest least											
351	Hexagonal orchards											
352	Blood tests											
353	Risky moon											
354	Distances in a bee's honeycomb											
355	Maximal coprime subset											
356	Largest roots of cubic polynomials											
357	Prime generating integers											
358	Cyclic numbers											
359	Hilbert's New Hotel											

360	Scary Sphere											
361	Subsequence of Thue-Morse sequence											
362	Squarefree factors											
363	Bézier Curves											
364	Comfortable distance											
365	A huge binomial coefficient											
366	Stone Game III											
367	Bozo sort											
368	A Kempner-like series											
369	Badugi											
370	Geometric triangles											
371	Licence plates											
372	Pencils of rays											
373	Circumscribed Circles											
374	Maximum Integer Partition Product											
375	Minimum of subsequences											
376	Nontransitive sets of dice											
377	Sum of digits - experience #13											
378	Triangle Triples											
379	Least common multiple count											
380	Amazing Mazes!											
381	(prime-k) factorial											
382	Generating polygons											
383	Divisibility comparison between factorials											
384	Rudin-Shapiro sequence											
385	Ellipses inside triangles											
386	Maximum length of an antichain											

387	Harshad Numbers											
388	Distinct Lines											
389	Platonic Dice											
390	Triangles with non rational sides and integral area											
391	Hopping Game											
392	Enmeshed unit circle											
393	Migrating ants											
394	Eating pie											
395	Pythagorean tree											
396	Weak Goodstein sequence											
397	Triangle on parabola											
398	Cutting rope											
399	Squarefree Fibonacci Numbers											
400	Fibonacci tree game											
401	Sum of squares of divisors											
402	Integer-valued polynomials											
403	Lattice points enclosed by parabola and line											
404	Crisscross Ellipses											
405	A rectangular tiling											
406	Guessing Game											
407	Idempotents											
408	Admissible paths through a grid											
409	Nim Extreme											
410	Circle and tangent line											
411	Uphill paths											
412	Gnomon numbering											
413	One-child Numbers											

414	Kaprekar constant											
415	Titanic sets											
416	A frog's trip											
417	Reciprocal cycles II											
418	Factorisation triples											
419	Look and say sequence											
420	2x2 positive integer matrix											
421	Prime factors of $n^{15}+1$											
422	Sequence of points on a hyperbola											
423	Consecutive die throws											
424	Kakuro											
425	Prime connection											
426	Box-ball system											
427	n-sequences											
428	Necklace of circles											
429	Sum of squares of unitary divisors											
430	Range flips											
431	Square Space Silo											
432	Totient sum											
433	Steps in Euclid's algorithm											
434	Rigid graphs											
435	Polynomials of Fibonacci numbers											
436	Unfair wager											
437	Fibonacci primitive roots											
438	Integer part of polynomial equation's solutions											
439	Sum of sum of divisors											
440	GCD and Tiling											

441	The inverse summation of coprime couples											
442	Eleven-free integers											
443	GCD sequence											
444	The Roundtable Lottery											
445	Retractions A											
446	Retractions B											
447	Retractions C											
448	Average least common multiple											
449	Chocolate covered candy											
450	Hypocycloid and Lattice points											
451	Modular inverses											
452	Long Products											
453	Lattice Quadrilaterals											
454	Diophantine reciprocals III											
455	Powers With Trailing Digits											
456	Triangles containing the origin II											
457	A polynomial modulo the square of a prime											
458	Permutations of Project											
459	Flipping game											
460	An ant on the move											
461	Almost Pi											
462	Permutation of 3-smooth numbers											
463	A weird recurrence relation											
464	Möbius function and intervals											
465	Polar polygons											
466	Distinct terms in a multiplication table											
467	Superinteger											

468	Smooth divisors of binomial coefficients											
469	Empty chairs											
470	Super Ramvok											
471	Triangle inscribed in ellipse											
472	Comfortable Distance II											
473	Phigital number base											
474	Last digits of divisors											
475	Music festival											
476	Circle Packing II											
477	Number Sequence Game											
478	Mixtures											
479	Roots on the Rise											
480	The Last Question											
481	Chef Showdown											
482	The incenter of a triangle											
483	Repeated permutation											
484	Arithmetic Derivative											
485	Maximum number of divisors											
486	Palindrome-containing strings											
487	Sums of power sums											
488	Unbalanced Nim											
489	Common factors between two sequences											
490	Jumping frog											
491	Double pandigital number divisible by 11											
492	Exploding sequence											
493	Under The Rainbow											
494	Collatz prefix families											

495	Writing n as the product of k distinct positive integers												
496	Incenter and circumcenter of triangle												
497	Drunken Tower of Hanoi												
498	Remainder of polynomial division												
499	St. Petersburg Lottery												
500	Problem 500!!!												
501	Eight Divisors												
502	Counting Castles												
503	Compromise or persist												
504	Square on the Inside												
505	Bidirectional Recurrence												
506	Clock sequence												
507	Shortest Lattice Vector												
508	Integers in base i-1												
509	Divisor Nim												
510	Tangent Circles												
511	Sequences with nice divisibility properties												
512	Sums of totients of powers												
513	Integral median												
514	Geoboard Shapes												
515	Dissonant Numbers												
516	5-smooth totients												
517	A real recursion												
518	Prime triples and geometric sequences												
519	Tricoloured Coin Fountains												
520	Simbers												

521	Smallest prime factor											
522	Hilbert's Blackout											
523	First Sort I											
524	First Sort II											
525	Rolling Ellipse											
526	Largest prime factors of consecutive numbers											
527	Randomized Binary Search											
528	Constrained Sums											
529	10-substrings											
530	GCD of Divisors											
531	Chinese leftovers											
532	Nanobots on Geodesics											
533	Minimum values of the Carmichael function											
534	Weak Queens											
535	Fractal Sequence											
536	Modulo power identity											
537	Counting tuples											
538	Maximum quadrilaterals											
539	Odd elimination											
540	Counting primitive Pythagorean triples											
541	Divisibility of Harmonic Number Denominators											
542	Geometric Progression with Maximum Sum											
543	Prime-Sum Numbers											
544	Chromatic Conundrum											
545	Faulhaber's Formulas											
546	The Floor's Revenge											

547	Distance of random points within hollow square laminae												
548	Gozinta Chains												
549	Divisibility of factorials												
550	Divisor game												
551	Sum of digits sequence												
552	Chinese leftovers II												
553	Power sets of power sets												
554	Centaur on a chess board												
555	McCarthy 91 function												
556	Squarefree Gaussian Integers												
557	Cutting triangles												
558	Irrational base												
559	Permuted Matrices												
560	Coprime Nim												
561	Divisor Pairs												
562	Maximal perimeter												
563	Robot Welders												
564	Maximal polygons												
565	Divisibility of sum of divisors												
566	Cake Icing Puzzle												
567	Reciprocal games I												
568	Reciprocal games II												
569	Prime Mountain Range												
570	Snowflakes												
571	Super Pandigital Numbers												
572	Idempotent matrices												

573	Unfair race											
574	Verifying Primes											
575	Wandering Robots											
576	Irrational jumps											
577	Counting hexagons											
578	Integers with decreasing prime powers											
579	Lattice points in lattice cubes											
580	Squarefree Hilbert numbers											
581	47-smooth triangular numbers											
582	Nearly isosceles 120 degree triangles											
583	Heron Envelopes											
584	Birthday Problem Revisited											
585	Nested square roots											
586	Binary Quadratic Form											
587	Concave triangle											
588	Quintinomial coefficients											
589	Poohsticks Marathon											
590	Sets with a given Least Common Multiple											
591	Best Approximations by Quadratic Integers											
592	Factorial trailing digits 2											
593	Fleeting Medians											
594	Rhombus Tilings											
595	Incremental Random Sort											
596	Number of lattice points in a hyperball											
597	Torpids											
598	Split Divisibilities											
599	Distinct Colourings of a Rubik's Cube											

600	Integer sided equiangular hexagons												
601	Divisibility streaks												
602	Product of Head Counts												
603	Substring sums of prime concatenations												
604	Convex path in square												
605	Pairwise Coin-Tossing Game												
606	Gozinta Chains II												
607	Marsh Crossing												
608	Divisor Sums												
609	π sequences												
610	Roman Numerals II												
611	Hallway of square steps												
612	Friend numbers												
613	Pythagorean Ant												
614	Special partitions 2												
615	The millionth number with at least one million prime factors												
616	Creative numbers												
617	Mirror Power Sequence												
618	Numbers with a given prime factor sum												
619	Square subsets												
620	Planetary Gears												
621	Expressing an integer as the sum of triangular numbers												
622	Riffle Shuffles												
623	Lambda Count												
624	Two heads are better than one												
625	Gcd sum												

626	Counting Binary Matrices											
627	Counting products											
628	Open chess positions											
629	Scatterstone Nim											
630	Crossed lines											
631	Constrained Permutations											
632	Square prime factors											
633	Square prime factors II											
634	Numbers of the form a^2b^3											
635	Subset sums											
636	Restricted Factorisations											
637	Flexible digit sum											
638	Weighted lattice paths											
639	Summing a multiplicative function											
640	Shut the Box											
641	A Long Row of Dice											
642	Sum of largest prime factors											
643	2-Friendly											
644	Squares on the line											
645	Every Day is a Holiday											
646	Bounded Divisors											
647	Linear Transformations of Polygonal Numbers											
648	Skipping Squares											
649	Low-Prime Chessboard Nim											
650	Divisors of Binomial Product											
651	Patterned Cylinders											
652	Distinct values of a proto-logarithmic function											

653	Frictionless Tube											
654	Neighbourly Constraints											
655	Divisible Palindromes											
656	Palindromic sequences											
657	Incomplete words											
658	Incomplete words II											
659	Largest prime											
660	Pandigital Triangles											
661	A Long Chess Match											
662	Fibonacci paths											
663	Sums of subarrays											
664	An infinite game											
665	Proportionate Nim											
666	Polymorphic Bacteria											
667	Moving Pentagon											
668	Square root smooth Numbers											
669	The King's Banquet											
670	Colouring a Strip											
671	Colouring a Loop											
672	One more one											
673	Beds and Desks											
674	Solving I-equations											
675	$2^{\omega(n)}$											
676	Matching Digit Sums											
677	Coloured Graphs											
678	Fermat-like Equations											
679	Freefarea											

680	Yarra Gnisrever												
681	Maximal Area												
682	5-Smooth Pairs												
683	The Chase II												
684	Inverse Digit Sum												
685	Inverse Digit Sum II												
686	Powers of Two												
687	Shuffling Cards												
688	Piles of Plates												
689	Binary Series												
690	Tom and Jerry												
691	Long substring with many repetitions												
692	Siegbert and Jo												
693	Finite Sequence Generator												
694	Cube-full Divisors												
695	Random Rectangles												
696	Mahjong												
697	Randomly Decaying Sequence												
698	123 Numbers												
699	Trifle Numbers												
700	Eulercoin												
701	Random connected area												
702	Jumping Flea												
703	Circular Logic II												
704	Factors of Two in Binomial Coefficients												
705	Total Inversion Count of Divided Sequences												
706	3-Like Numbers												

707	Lights Out												
708	Twos are all you need												
709	Even Stevens												
710	One Million Members												
711	Binary Blackboard												
712	Exponent Difference												
713	Turán's water heating system												
714	Duodigits												
715	Sextuplet Norms												
716	Grid Graphs												
717	Summation of a Modular Formula												
718	Unreachable Numbers												
719	Number Splitting												
720	Unpredictable Permutations												
721	High powers of irrational numbers												
722	Slowly converging series												
723	Pythagorean Quadrilaterals												
724	Drone Delivery												
725	Digit sum numbers												
726	Falling bottles												
727	Triangle of Circular Arcs												
728	Circle of Coins												
729	Range of periodic sequence												
730	Shifted Pythagorean Triples												
731	A Stoneham Number												
732	Standing on the shoulders of trolls												
733	Ascending subsequences												

734	A bit of prime											
735	Divisors of $2n^2$											
736	Paths to Equality											
737	Coin Loops											
738	Counting Ordered Factorisations											
739	Summation of Summations											
740	Secret Santa											
741	Binary grid colouring											
742	Minimum area of a convex grid polygon											
743	Window into a Matrix											
744	What? Where? When?											
745	Sum of Squares											
746	A Messy Dinner											
747	Triangular Pizza											
748	Upside down Diophantine equation											
749	Near Power Sums											
750	Optimal Card Stacking											
751	Concatenation Coincidence											
752	Powers of $1+\sqrt{7}$											
753	Fermat Equation											
754	Product of Gauss Factorials											
755	Not Zeckendorf											
756	Approximating a Sum											
757	Stealthy Numbers											
758	Buckets of Water											
759	A squared recurrence relation											
760	Sum over Bitwise Operators											

761	Runner and Swimmer											
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