Tables 2

List of Contents

Pythagorean Triplets ...1

Any three numbers X, Y, Z which fit the relationship

$$X^2 + Y^2 = Z^2$$

are known as a Pythagorean triplet since they could be used as the edge lengths of a right-angled triangle.

If X, Y, Z have no factors in common then they are known as a Primitive Pythagorean Triplet. So, 3,4,5 is a primitive triplet while 6,8,10 or 9,12,15 etc are not. This also shows how primitive triplets can be used to form an infinity of non-primitive triplets by use of scale factors.

A method for finding Pythagorean Triplets has been known since the time of early Greek mathematics. Take any two numbers m and n (with $m > n$)

if $X = m^2 - n^2$ $Y = 2mn$ $Z = m^2 + n^2$

then $X^2 + Y^2 = Z^2$

This method produces ALL the primitive triplets but it also produces some non-primitive triplets as well. For instance, when $m = 4$, $n = 1$ the primitive triplet 8,15,17 is made; but $m = 5$, $n = 3$ produces 16,30,34 which is simply a multiple of the previous one.

To make sure that ONLY primitives are generated it is necessary to ensure that that m,n have no factors in common and that when one of them is even, the other is odd.

The method given does not even generate ALL the possible Pythagorean triplets (both primitive and non-primitive). For example there are no values of m,n which will make the triplet 9,12,15. To make all possible triplets it is necessary to use

$X = K(m^2 - n^2)$ $Y = K(2mn)$ $Z = K(m^2 + n^2)$

and now

$K = 3$, $m = 2$, $n = 1$ will yield 9,12,15

Unfortunately this method will find some triplets twice. For instance,

$K = 1$, $m = 7$, $n = 1$ gives the same triplet as

$K = 2$, $m = 4$, $n = 3$

This can be overcome by putting the same conditions on m,n as stated above.

The table on the next page lists all those primitive Pythagorean triplets (and the m,n values needed to generate them) having $Z < 1000$. They are listed in order of their Z value.

In any Pythagorean triplet -

One of X,Y,Z is divisible by 3, and one by 5

Y is always divisible by 4

XY is divisible by 12

XYZ is divisible by 60

In a primitive triplet Z is always odd

Some algorithms for making Pythagorean triplets

Start with an **odd** number greater than 1
Square it
Split the result into two consecutive numbers
These two number, together with the starting number will form a Pythagorean triplet.
Example: starting with 7 produces 7, 24, 25

Start with a number that is a multiple of 4
Square it and divide by 2
Split the result into two consecutive **odd** numbers
These two number, together with the starting number will form a Pythagorean triplet.
Example: starting with 8 produces 8, 15, 17

Start with an **even** number greater than 2
Divide by 2 and square the result
From this new number make two other numbers by subtracting 1 from and adding 1 to, the new number.
These two number, together with the starting number will form a Pythagorean triplet.
Example: starting with 6 produces 6, 8, 10

Start with a multiple of 4 greater than 8
Divide by 4 and square the result
From this new number make two other numbers by subtracting 4 from and adding 4 to, the new number.
These two number, together with the starting number will form a Pythagorean triplet.
Example: starting with 20 produces 20, 21, 29

Start with any two consecutive numbers
A. Add them
B. Multiply them together and then multiply by 2
C. Square both of them and add the results
The answers to A, B, C will form a Pythagorean triplet.
Example: starting with 3, 4 produces 7, 24, 25

Start with any number greater than 1
A. Double it
B. Square it and subtract 1
C. Square it and add 1
The answers to A, B, C will form a Pythagorean triplet.
Example: starting with 4 produces 8, 15, 17

Some of the patterns in Pythagorean triplets

6	8	10
8	15	17
10	24	26
12	35	37
14	48	50
	etc	

12	5	13
16	12	20
20	21	29
24	32	40
28	45	53
	etc	

24	7	25
30	16	34
36	27	45
42	40	58
48	55	73
	etc	

	Triplet			Sum	Factors
$3^2 = 4 + 5$	3	4	5	12	3 x 4 = 3 x 2 x 2
$5^2 = 12 + 13$	5	12	13	30	5 x 6 = 5 x 3 x 2
$7^2 = 24 + 25$	7	24	25	56	7 x 8 = 7 x 4 x 2
$9^2 = 40 + 41$	9	40	41	90	9 x 10=9 x 5 x 2

Pythagorean Triplets …2

m,n	X	Y	Z
2,1	3	4	5
3,2	5	12	13
4,1	15	8	17
4,3	7	24	25
5,2	21	20	29
6,1	35	12	37
5,4	9	40	41
7,2	45	28	53
6,5	11	60	61
7,4	33	56	65
8,1	63	16	65
8,3	55	48	73
7,6	13	84	85
9,2	77	36	85
8,5	39	80	89
9,4	65	72	97
10,1	99	20	101
10,3	91	60	109
8,7	15	112	113
11,2	117	44	125
11,4	105	88	137
9,8	17	144	145
12,1	143	24	145
10,7	51	140	149
11,6	85	132	157
12,5	119	120	169
13,2	165	52	173
10,9	19	180	181
11,8	57	176	185
13,4	153	104	185
12,7	95	168	193
14,1	195	28	197
13,6	133	156	205
14,3	187	84	205
11,10	21	220	221
14,5	171	140	221
15,2	221	60	229
13,8	105	208	233
15,4	209	120	241
16,1	255	32	257
12,11	23	264	265
16,3	247	96	265
13,10	69	260	269
14,9	115	252	277
16,5	231	160	281
15,8	161	240	289
17,2	285	68	293
16,7	207	224	305
17,4	273	136	305
13,12	25	312	313
14,11	75	308	317
17,6	253	204	325
18,1	323	36	325
16,9	175	288	337
18,5	299	180	349

m,n	X	Y	Z
17,8	225	272	353
14,13	27	364	365
19,2	357	76	365
18,7	275	252	373
16,11	135	352	377
19,4	345	152	377
17,10	189	340	389
19,6	325	228	397
20,1	399	40	401
20,3	391	120	409
15,14	29	420	421
16,13	87	416	425
19,8	297	304	425
17,12	145	408	433
18,11	203	396	445
21,2	437	84	445
20,7	351	280	449
21,4	425	168	457
19,10	261	380	461
16,15	31	480	481
20,9	319	360	481
17,14	93	476	485
22,1	483	44	485
18,13	155	468	493
22,3	475	132	493
19,12	217	456	505
21,8	377	336	505
22,5	459	220	509
20,11	279	440	521
22,7	435	308	533
23,2	525	92	533
21,10	341	420	541
17,16	33	544	545
23,4	513	184	545
19,14	165	532	557
22,9	403	396	565
23,6	493	276	565
20,13	231	520	569
24,1	575	48	577
23,8	465	368	593
24,5	551	240	601
18,17	35	612	613
19,16	105	608	617
24,7	527	336	625
23,10	429	460	629
25,2	621	100	629
25,4	609	200	641
22,13	315	572	653
25,6	589	300	661
23,12	385	552	673
26,1	675	52	677
19,18	37	684	685
26,3	667	156	685
20,17	111	680	689
25,8	561	400	689

m,n	X	Y	Z
21,16	185	672	697
24,11	455	528	697
26,5	651	260	701
22,15	259	660	709
23,14	333	644	725
26,7	627	364	725
27,2	725	108	733
24,13	407	624	745
27,4	713	216	745
26,9	595	468	757
20,19	39	760	761
25,12	481	600	769
22,17	195	748	773
23,16	273	736	785
28,1	783	56	785
27,8	665	432	793
28,3	775	168	793
26,11	555	572	797
28,5	759	280	809
25,14	429	700	821
27,10	629	540	829
21,20	41	840	841
22,19	123	836	845
29,2	837	116	845
23,18	205	828	853
29,4	825	232	857
24,17	287	816	865
28,9	703	504	865
29,6	805	348	877
25,16	369	800	881
26,15	451	780	901
30,1	899	60	901
28,11	663	616	905
29,8	777	464	905
22,21	43	924	925
27,14	533	756	925
23,20	129	920	929
24,19	215	912	937
29,10	741	580	941
25,18	301	900	949
30,7	851	420	949
28,13	615	728	953
26,17	387	884	965
31,2	957	124	965
31,4	945	248	977
27,16	473	864	985
29,12	697	696	985
31,6	925	372	997

Polygon Numbers ...1

polygon numbers A polygon number is a number which states the quantity of objects needed so that the objects can be arranged in the shape of a regular polygon with all the possible smaller polygons included in it. Several examples are shown below These polygons always start with 1. *The number is named after the shape. They are also known as* **figurate numbers**.
There is no standardised notation for representing any of these numbers.

$P_e(n)$ is used here to indicate a polygon number. It makes a polygon having ***e*** edges and that gives the number its name (3 = triangle, 4 = square etc.). ***n*** is the number of objects along the length of one edge, and is also the position of the number in the sequence.

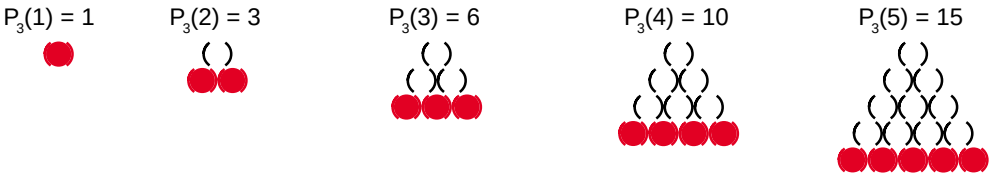
The general formula is $P_e(n) = n\,[\,2 + (e - 2)\,(n - 1)\,] \div 2$

centred-polygon numbers are those numbers made by taking ***e* triangle numbers** of the same size and adding 1. *As with the polygon numbers, their names are determined by the value of* ***e****. In making the actual shape, the 1 goes in the centre, and the triangles are arranged around it.*

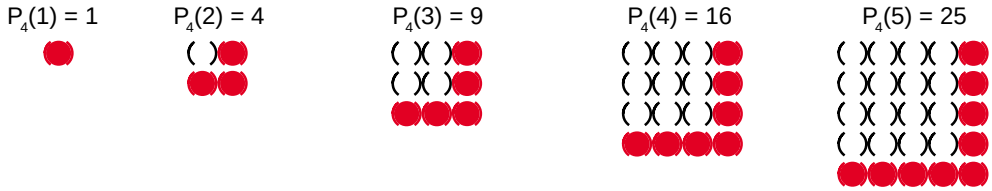
$C_e(n)$ is used here to indicate a centred-polygon number, using the definitions for ***n*** and ***e*** as given above. *The value of any centred-polygon number for given values of* ***n*** *and* ***e*** *can be found from the formula*

$C_e(n) = [en(n - 1) \div 2]$

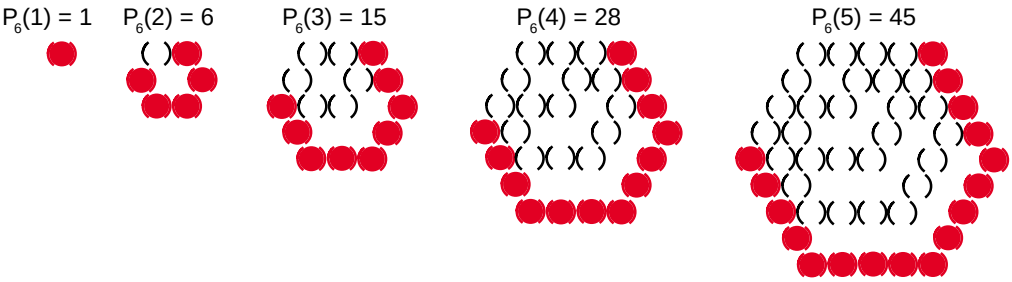
triangle numbers



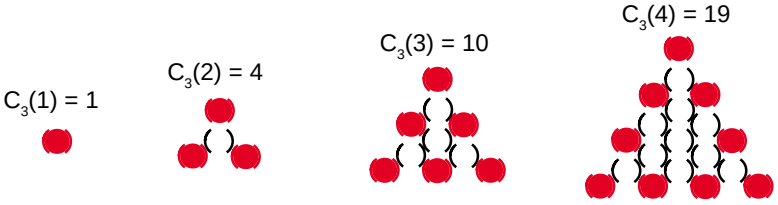
square numbers



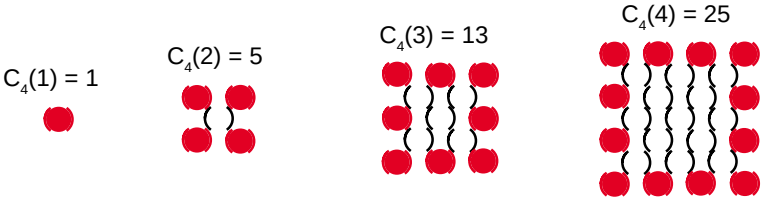
hexagon numbers



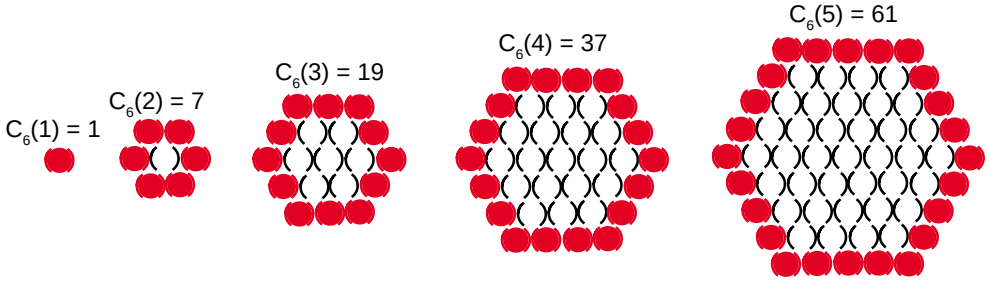
centred-triangle numbers



centred-square numbers



centred-hexagon numbers



Polygon Numbers …2

Values of Polygon Numbers

$$P_e(n) = n\,[\,2 + (e - 2)\,(n - 1)\,] \div 2$$

e is number of edges of polygon n is length of edge

n	e = 3	4	5	6	7	8	9	10	n
1	1	1	1	1	1	1	1	1	**1**
2	3	4	5	6	7	8	9	10	**2**
3	6	9	12	15	18	21	24	27	**3**
4	10	16	22	28	34	40	46	52	**4**
5	15	25	35	45	55	65	75	85	**5**
6	21	36	51	66	81	96	111	126	**6**
7	28	49	70	91	112	133	154	175	**7**
8	36	64	92	120	148	176	204	232	**8**
9	45	81	117	153	189	225	261	297	**9**
10	55	100	145	190	235	280	325	370	**10**
11	66	121	176	231	286	341	396	451	**11**
12	78	144	210	276	342	408	474	540	**12**
13	91	169	247	325	403	481	559	637	**13**
14	105	196	287	378	469	560	651	742	**14**
15	120	225	330	435	540	645	750	855	**15**
16	136	256	376	496	616	736	856	976	**16**
17	153	289	425	561	697	833	969	1 105	**17**
18	171	324	477	630	783	936	1 089	1 242	**18**
19	190	361	532	703	874	1 045	1 216	1 387	**19**
20	210	400	590	780	970	1 160	1 350	1 540	**20**
21	231	441	651	861	1 071	1 281	1 491	1 701	**21**
22	253	484	715	946	1 177	1 408	1 639	1 870	**22**
23	276	529	782	1 035	1 288	1 541	1 794	2 047	**23**
24	300	576	852	1 128	1 404	1 680	1 956	2 232	**24**
25	325	625	925	1 225	1 525	1 825	2 125	2 425	**25**
26	351	676	1 001	1 326	1 651	1 976	2 301	2 626	**26**
27	378	729	1 080	1 431	1 782	2 133	2 484	2 835	**27**
28	406	784	1 162	1 540	1 918	2 296	2 674	3 052	**28**
29	435	841	1 247	1 653	2 059	2 465	2 871	3 277	**29**
30	465	900	1 335	1 770	2 205	2 640	3 075	3 510	**30**
31	496	961	1 426	1 891	2 356	2 821	3 286	3 751	**31**
32	528	1 024	1 520	2 016	2 512	3 008	3 504	4 000	**32**
33	561	1 089	1 617	2 145	2 673	3 201	3 729	4 257	**33**
34	595	1 156	1 717	2 278	2 839	3 400	3 961	4 522	**34**
35	630	1 225	1 820	2 415	3 010	3 605	4 200	4 795	**35**
36	666	1 296	1 926	2 556	3 186	3 816	4 446	5 076	**36**
37	703	1 369	2 035	2 701	3 367	4 033	4 699	5 365	**37**
38	741	1 444	2 147	2 850	3 553	4 256	4 959	5 662	**38**
39	780	1 521	2 262	3 003	3 744	4 485	5 226	5 967	**39**
40	820	1 600	2 380	3 160	3 940	4 720	5 500	6 280	**40**
41	861	1 681	2 501	3 321	4 141	4 961	5 781	6 601	**41**
42	903	1 764	2 625	3 486	4 347	5 208	6 069	6 930	**42**
43	946	1 849	2 752	3 655	4 558	5 461	6 364	7 267	**43**
44	990	1 936	2 882	3 828	4 774	5 720	6 666	7 612	**44**
45	1 035	2 025	3 015	4 005	4 995	5 985	6 975	7 965	**45**
46	1 081	2 116	3 151	4 186	5 221	6 256	7 291	8 326	**46**
47	1 128	2 209	3 290	4 371	5 452	6 533	7 614	8 695	**47**
48	1 176	2 304	3 432	4 560	5 688	6 816	7 944	9 072	**48**
49	1 225	2 401	3 577	4 753	5 929	7 105	8 281	9 457	**49**
50	1 275	2 500	3 725	4 950	6 175	7 400	8 625	9 850	**50**

Values of Centred-Polygon Numbers

$$C_e(n) = [en(n - 1) \div 2] + 1$$

e is number of edges of polygon n is length of edge

n	e = 3	4	5	6	7	8	9	10	n
1	1	1	1	1	1	1	1	1	**1**
2	4	5	6	7	8	9	10	11	2
3	10	13	16	19	22	25	28	31	**3**
4	19	25	31	37	43	49	55	61	**4**
5	31	41	51	61	71	81	91	101	**5**
6	46	61	76	91	106	121	136	151	**6**
7	64	85	106	127	148	169	190	211	**7**
8	85	113	141	169	197	225	253	281	**8**
9	109	145	181	217	253	289	325	361	**9**
10	136	181	226	271	316	361	406	451	**10**
11	166	221	276	331	386	441	496	551	**11**
12	199	265	331	397	463	529	595	661	**12**
13	235	313	391	469	547	625	703	781	**13**
14	274	365	456	547	638	729	820	911	**14**
15	316	421	526	631	736	841	946	1 051	**15**
16	361	481	601	721	841	961	1 081	1 201	**16**
17	409	545	681	817	953	1 089	1 225	1 361	**17**
18	460	613	766	919	1 072	1 225	1 378	1 531	**18**
19	514	685	856	1 027	1 198	1 369	1 540	1 711	**19**
20	571	761	951	1 141	1 331	1 521	1 711	1 901	**20**
21	631	841	1 051	1 261	1 471	1 681	1 891	2 101	**21**
22	694	925	1 156	1 387	1 618	1 849	2 080	2 311	**22**
23	760	1 013	1 266	1 519	1 772	2 025	2 278	2 531	**23**
24	829	1 105	1 381	1 657	1 933	2 209	2 485	2 761	**24**
25	901	1 201	1 501	1 801	2 101	2 401	2 701	3 001	**25**
26	976	1 301	1 626	1 951	2 276	2 601	2 926	3 251	**26**
27	1 054	1 405	1 756	2 107	2 458	2 809	3 160	3 511	**27**
28	1 135	1 513	1 891	2 269	2 647	3 025	3 403	3 781	**28**
29	1 219	1 625	2 031	2 437	2 843	3 249	3 655	4 061	**29**
30	1 306	1 741	2 176	2 611	3 046	3 481	3 916	4 351	**30**
31	1 396	1 861	2 326	2 791	3 256	3 721	4 186	4 651	**31**
32	1 489	1 985	2 481	2 977	3 473	3 969	4 465	4 961	**32**
33	1 585	2 113	2 641	3 169	3 697	4 225	4 753	5 281	**33**
34	1 684	2 245	2 806	3 367	3 928	4 489	5 050	5 611	**34**
35	1 786	2 381	2 976	3 571	4 166	4 761	5 356	5 951	**35**
36	1 891	2 521	3 151	3 781	4 411	5 041	5 671	6 301	**36**
37	1 999	2 665	3 331	3 997	4 663	5 329	5 995	6 661	**37**
38	2 110	2 813	3 516	4 219	4 922	5 625	6 328	7 031	**38**
39	2 224	2 965	3 706	4 447	5 188	5 929	6 670	7 411	**39**
40	2 341	3 121	3 901	4 681	5 461	6 241	7 021	7 801	**40**
41	2 461	3 281	4 101	4 921	5 741	6 561	7 381	8 201	**41**
42	2 584	3 445	4 306	5 167	6 028	6 889	7 750	8 611	**42**
43	2 710	3 613	4 516	5 419	6 322	7 225	8 128	9 031	**43**
44	2 839	3 785	4 731	5 677	6 623	7 569	8 515	9 461	**44**
45	2 971	3 961	4 951	5 941	6 931	7 921	8 911	9 901	**45**
46	3 106	4 141	5 176	6 211	7 246	8 281	9 316	10 351	**46**
47	3 244	4 325	5 406	6 487	7 568	8 649	9 730	10 811	**47**
48	3 385	4 513	5 641	6 769	7 897	9 025	10 153	11 281	**48**
49	3 529	4 705	5 881	7 057	8 233	9 409	10 585	11 761	**49**
50	3 676	4 901	6 126	7 351	8 576	9 801	11 026	12 251	**50**

Factors of Numbers… 1 to 250

Nf is number of factors of **N** - *including* 1 and **N** itself.
Sf is smallest prime factor of **N** - *excluding* **N** itself.

N	Nf	Sf
1	1	
2	2	
3	2	
4	3	2
5	2	
6	4	2
7	2	
8	4	2
9	3	3
10	4	2
11	2	
12	6	2
13	2	
14	4	2
15	4	3
16	5	2
17	2	
18	6	2
19	2	
20	6	2
21	4	3
22	4	2
23	2	
24	8	2
25	3	5
26	4	2
27	4	3
28	6	2
29	2	
30	8	2
31	2	
32	6	2
33	4	3
34	4	2
35	4	5
36	9	2
37	2	
38	4	2
39	4	3
40	8	2
41	2	
42	8	2
43	2	
44	6	2
45	6	3
46	4	2
47	2	
48	10	2
49	3	7
50	6	2

N	Nf	Sf
51	4	3
52	6	2
53	2	
54	8	2
55	4	5
56	8	2
57	4	3
58	4	2
59	2	
60	12	2
61	2	
62	4	2
63	6	3
64	7	2
65	4	5
66	8	2
67	2	
68	6	2
69	4	3
70	8	2
71	2	
72	12	2
73	2	
74	4	2
75	6	3
76	6	2
77	4	7
78	8	2
79	2	
80	10	2
81	5	3
82	4	2
83	2	
84	12	2
85	4	5
86	4	2
87	4	3
88	8	2
89	2	
90	12	2
91	4	7
92	6	2
93	4	3
94	4	2
95	4	5
96	12	2
97	2	
98	6	2
99	6	3
100	9	2

N	Nf	Sf
101	2	
102	8	2
103	2	
104	8	2
105	8	3
106	4	2
107	2	
108	12	2
109	2	
110	8	2
111	4	3
112	10	2
113	2	
114	8	2
115	4	5
116	6	2
117	6	3
118	4	2
119	4	7
120	16	2
121	3	11
122	4	2
123	4	3
124	6	2
125	4	5
126	12	2
127	2	
128	8	2
129	4	3
130	8	2
131	2	
132	12	2
133	4	7
134	4	2
135	8	3
136	8	2
137	2	
138	8	2
139	2	
140	12	2
141	4	3
142	4	2
143	4	11
144	15	2
145	4	5
146	4	2
147	6	3
148	6	2
149	2	
150	12	2

N	Nf	Sf
151	2	
152	8	2
153	6	3
154	8	2
155	4	5
156	12	2
157	2	
158	4	2
159	4	3
160	12	2
161	4	7
162	10	2
163	2	
164	6	2
165	8	3
166	4	2
167	2	
168	16	2
169	3	13
170	8	2
171	6	3
172	6	2
173	2	
174	8	2
175	6	5
176	10	2
177	4	3
178	4	2
179	2	
180	18	2
181	2	
182	8	2
183	4	3
184	8	2
185	4	5
186	8	2
187	4	11
188	6	2
189	8	3
190	8	2
191	2	
192	14	2
193	2	
194	4	2
195	8	3
196	9	2
197	2	
198	12	2
199	2	
200	12	2

N	Nf	Sf
201	4	3
202	4	2
203	4	7
204	12	2
205	4	5
206	4	2
207	6	3
208	10	2
209	4	11
210	16	2
211	2	
212	6	2
213	4	3
214	4	2
215	4	5
216	16	2
217	4	7
218	4	2
219	4	3
220	12	2
221	4	13
222	8	2
223	2	
224	12	2
225	9	3
226	4	2
227	2	
228	12	2
229	2	
230	8	2
231	8	3
232	8	2
233	2	
234	12	2
235	4	5
236	6	2
237	4	3
238	8	2
239	2	
240	20	2
241	2	
242	6	2
243	6	3
244	6	2
245	6	5
246	8	2
247	4	13
248	8	2
249	4	3
250	8	2

Factors of Numbers… 251 to 500

Nf is number of factors of **N** - *including* 1 and **N** itself.
Sf is smallest prime factor of **N** - *excluding* **N** itself.

N	Nf	Sf
251	2	
252	18	2
253	4	11
254	4	2
255	8	3
256	9	2
257	2	
258	8	2
259	4	7
260	12	2
261	6	3
262	4	2
263	2	
264	16	2
265	4	5
266	8	2
267	4	3
268	6	2
269	2	
270	16	2
271	2	
272	10	2
273	8	3
274	4	2
275	6	5
276	12	2
277	2	
278	4	2
279	6	3
280	16	2
281	2	
282	8	2
283	2	
284	6	2
285	8	3
286	8	2
287	4	7
288	18	2
289	3	17
290	8	2
291	4	3
292	6	2
293	2	
294	12	2
295	4	5
296	8	2
297	8	3
298	4	2
299	4	13
300	18	2

N	Nf	Sf
301	4	7
302	4	2
303	4	3
304	10	2
305	4	5
306	12	2
307	2	
308	12	2
309	4	3
310	8	2
311	2	
312	16	2
313	2	
314	4	2
315	12	3
316	6	2
317	2	
318	8	2
319	4	11
320	14	2
321	4	3
322	8	2
323	4	17
324	15	2
325	6	5
326	4	2
327	4	3
328	8	2
329	4	7
330	16	2
331	2	
332	6	2
333	6	3
334	4	2
335	4	5
336	20	2
337	2	
338	6	2
339	4	3
340	12	2
341	4	11
342	12	2
343	4	7
344	8	2
345	8	3
346	4	2
347	2	
348	12	2
349	2	
350	12	2

N	Nf	Sf
351	8	3
352	12	2
353	2	
354	8	2
355	4	5
356	6	2
357	8	3
358	4	2
359	2	
360	24	2
361	3	19
362	4	2
363	6	3
364	12	2
365	4	5
366	8	2
367	2	
368	10	2
369	6	3
370	8	2
371	4	7
372	12	2
373	2	
374	8	2
375	8	3
376	8	2
377	4	13
378	16	2
379	2	
380	12	2
381	4	3
382	4	2
383	2	
384	16	2
385	8	5
386	4	2
387	6	3
388	6	2
389	2	
390	16	2
391	4	17
392	12	2
393	4	3
394	4	2
395	4	5
396	18	2
397	2	
398	4	2
399	8	3
400	15	2

N	Nf	Sf
401	2	
402	8	2
403	4	13
404	6	2
405	10	3
406	8	2
407	4	11
408	16	2
409	2	
410	8	2
411	4	3
412	6	2
413	4	7
414	12	2
415	4	5
416	12	2
417	4	3
418	8	2
419	2	
420	24	2
421	2	
422	4	2
423	6	3
424	8	2
425	6	5
426	8	2
427	4	7
428	6	2
429	8	3
430	8	2
431	2	
432	20	2
433	2	
434	8	2
435	8	3
436	6	2
437	4	19
438	8	2
439	2	
440	16	2
441	9	3
442	8	2
443	2	
444	12	2
445	4	5
446	4	2
447	4	3
448	14	2
449	2	
450	18	2

N	Nf	Sf
451	4	11
452	6	2
453	4	3
454	4	2
455	8	5
456	16	2
457	2	
458	4	2
459	8	3
460	12	2
461	2	
462	16	2
463	2	
464	10	2
465	8	3
466	4	2
467	2	
468	18	2
469	4	7
470	8	2
471	4	3
472	8	2
473	4	11
474	8	2
475	6	5
476	12	2
477	6	3
478	4	2
479	2	
480	24	2
481	4	13
482	4	2
483	8	3
484	9	2
485	4	5
486	12	2
487	2	
488	8	2
489	4	3
490	12	2
491	2	
492	12	2
493	4	17
494	8	2
495	12	3
496	10	2
497	4	7
498	8	2
499	2	
500	12	2

Factors of Numbers… 501 to 750

Nf is number of factors of **N** - *including* 1 and **N** itself.
Sf is smallest prime factor of **N** - *excluding* **N** itself.

N	Nf	Sf
501	4	3
502	4	2
503	2	
504	24	2
505	4	5
506	8	2
507	6	3
508	6	2
509	2	
510	16	2
511	4	7
512	10	2
513	8	3
514	4	2
515	4	5
516	12	2
517	4	11
518	8	2
519	4	3
520	16	2
521	2	
522	12	2
523	2	
524	6	2
525	12	3
526	4	2
527	4	17
528	20	2
529	3	23
530	8	2
531	6	3
532	12	2
533	4	13
534	8	2
535	4	5
536	8	2
537	4	3
538	4	2
539	6	7
540	24	2
541	2	
542	4	2
543	4	3
544	12	2
545	4	5
546	16	2
547	2	
548	6	2
549	6	3
550	12	2

N	Nf	Sf
551	4	19
552	16	2
553	4	7
554	4	2
555	8	3
556	6	2
557	2	
558	12	2
559	4	13
560	20	2
561	8	3
562	4	2
563	2	
564	12	2
565	4	5
566	4	2
567	10	3
568	8	2
569	2	
570	16	2
571	2	
572	12	2
573	4	3
574	8	2
575	6	5
576	21	2
577	2	
578	6	2
579	4	3
580	12	2
581	4	7
582	8	2
583	4	11
584	8	2
585	12	3
586	4	2
587	2	
588	18	2
589	4	19
590	8	2
591	4	3
592	10	2
593	2	
594	16	2
595	8	5
596	6	2
597	4	3
598	8	2
599	2	
600	24	2

N	Nf	Sf
601	2	
602	8	2
603	6	3
604	6	2
605	6	5
606	8	2
607	2	
608	12	2
609	8	3
610	8	2
611	4	13
612	18	2
613	2	
614	4	2
615	8	3
616	16	2
617	2	
618	8	2
619	2	
620	12	2
621	8	3
622	4	2
623	4	7
624	20	2
625	5	5
626	4	2
627	8	3
628	6	2
629	4	17
630	24	2
631	2	
632	8	2
633	4	3
634	4	2
635	4	5
636	12	2
637	6	7
638	8	2
639	6	3
640	16	2
641	2	
642	8	2
643	2	
644	12	2
645	8	3
646	8	2
647	2	
648	20	2
649	4	11
650	12	2

N	Nf	Sf
651	8	3
652	6	2
653	2	
654	8	2
655	4	5
656	10	2
657	6	3
658	8	2
659	2	
660	24	2
661	2	
662	4	2
663	8	3
664	8	2
665	8	5
666	12	2
667	4	23
668	6	2
669	4	3
670	8	2
671	4	11
672	24	2
673	2	
674	4	2
675	12	3
676	9	2
677	2	
678	8	2
679	4	7
680	16	2
681	4	3
682	8	2
683	2	
684	18	2
685	4	5
686	8	2
687	4	3
688	10	2
689	4	13
690	16	2
691	2	
692	6	2
693	12	3
694	4	2
695	4	5
696	16	2
697	4	17
698	4	2
699	4	3
700	18	2

N	Nf	Sf
701	2	
702	16	2
703	4	19
704	14	2
705	8	3
706	4	2
707	4	7
708	12	2
709	2	
710	8	2
711	6	3
712	8	2
713	4	23
714	16	2
715	8	5
716	6	2
717	4	3
718	4	2
719	2	
720	30	2
721	4	7
722	6	2
723	4	3
724	6	2
725	6	5
726	12	2
727	2	
728	16	2
729	7	3
730	8	2
731	4	17
732	12	2
733	2	
734	4	2
735	12	3
736	12	2
737	4	11
738	12	2
739	2	
740	12	2
741	8	3
742	8	2
743	2	
744	16	2
745	4	5
746	4	2
747	6	3
748	12	2
749	4	7
750	16	2

Factors of Numbers… 751 to 1000

Nf is number of factors of **N** - *including* 1 and **N** itself.
Sf is smallest prime factor of **N** - *excluding* **N** itself.

N	Nf	Sf
751	2	
752	10	2
753	4	3
754	8	2
755	4	5
756	24	2
757	2	
758	4	2
759	8	3
760	16	2
761	2	
762	8	2
763	4	7
764	6	2
765	12	3
766	4	2
767	4	13
768	18	2
769	2	
770	16	2
771	4	3
772	6	2
773	2	
774	12	2
775	6	5
776	8	2
777	8	3
778	4	2
779	4	19
780	24	2
781	4	11
782	8	2
783	8	3
784	15	2
785	4	5
786	8	2
787	2	
788	6	2
789	4	3
790	8	2
791	4	7
792	24	2
793	4	13
794	4	2
795	8	3
796	6	2
797	2	
798	16	2
799	4	17
800	18	2

N	Nf	Sf
801	6	3
802	4	2
803	4	11
804	12	2
805	8	5
806	8	2
807	4	3
808	8	2
809	2	
810	20	2
811	2	
812	12	2
813	4	3
814	8	2
815	4	5
816	20	2
817	4	19
818	4	2
819	12	3
820	12	2
821	2	
822	8	2
823	2	
824	8	2
825	12	3
826	8	2
827	2	
828	18	2
829	2	
830	8	2
831	4	3
832	14	2
833	6	7
834	8	2
835	4	5
836	12	2
837	8	3
838	4	2
839	2	
840	32	2
841	3	29
842	4	2
843	4	3
844	6	2
845	6	5
846	12	2
847	6	7
848	10	2
849	4	3
850	12	2

N	Nf	Sf
851	4	23
852	12	2
853	2	
854	8	2
855	12	3
856	8	2
857	2	
858	16	2
859	2	
860	12	2
861	8	3
862	4	2
863	2	
864	24	2
865	4	5
866	4	2
867	6	3
868	12	2
869	4	11
870	16	2
871	4	13
872	8	2
873	6	3
874	8	2
875	8	5
876	12	2
877	2	
878	4	2
879	4	3
880	20	2
881	2	
882	18	2
883	2	
884	12	2
885	8	3
886	4	2
887	2	
888	16	2
889	4	7
890	8	2
891	10	3
892	6	2
893	4	19
894	8	2
895	4	5
896	16	2
897	8	3
898	4	2
899	4	29
900	27	2

N	Nf	Sf
901	4	17
902	8	2
903	8	3
904	8	2
905	4	5
906	8	2
907	2	
908	6	2
909	6	3
910	16	2
911	2	
912	20	2
913	4	11
914	4	2
915	8	3
916	6	2
917	4	7
918	16	2
919	2	
920	16	2
921	4	3
922	4	2
923	4	13
924	24	2
925	6	5
926	4	2
927	6	3
928	12	2
929	2	
930	16	2
931	6	7
932	6	2
933	4	3
934	4	2
935	8	5
936	24	2
937	2	
938	8	2
939	4	3
940	12	2
941	2	
942	8	2
943	4	23
944	10	2
945	16	3
946	8	2
947	2	
948	12	2
949	4	13
950	12	2

N	Nf	Sf
951	4	3
952	16	2
953	2	
954	12	2
955	4	5
956	6	2
957	8	3
958	4	2
959	4	7
960	28	2
961	3	31
962	8	2
963	6	3
964	6	2
965	4	5
966	16	2
967	2	
968	12	2
969	8	3
970	8	2
971	2	
972	18	2
973	4	7
974	4	2
975	12	3
976	10	2
977	2	
978	8	2
979	4	11
980	18	2
981	6	3
982	4	2
983	2	
984	16	2
985	4	5
986	8	2
987	8	3
988	12	2
989	4	23
990	24	2
991	2	
992	12	2
993	4	3
994	8	2
995	4	5
996	12	2
997	2	
998	4	2
999	8	3
1000	16	2

Prime Period Lengths

PL is periodic length of **N**

N	PL
3	1
7	6
11	2
13	6
17	16
19	18
23	22
29	28
31	15
37	3
41	5
43	21
47	46
53	13
59	58
61	60
67	33
71	35
73	8
79	13
83	41
89	44
97	96
101	4
103	34
107	53
109	108
113	112
127	42
131	130
137	8
139	46
149	148
151	75
157	78
163	81
167	166
173	43
179	178
181	180
191	95
193	192
197	98
199	99
211	30
223	222
227	113
229	228
233	232
239	7

N	PL
241	30
251	50
257	256
263	262
269	268
271	5
277	69
281	28
283	141
293	146
307	153
311	155
313	312
317	79
331	110
337	336
347	173
349	116
353	32
359	179
367	366
373	186
379	378
383	382
389	388
397	99
401	200
409	204
419	418
421	140
431	215
433	432
439	219
443	221
449	32
457	152
461	460
463	154
467	233
479	239
487	486
491	490
499	498
503	502
509	508
521	52
523	261
541	540
547	91
557	278

N	PL
563	281
569	284
571	570
577	576
587	293
593	592
599	299
601	300
607	202
613	51
617	88
619	618
631	315
641	32
643	107
647	646
653	326
659	658
661	220
673	224
677	338
683	341
691	230
701	700
709	708
719	359
727	726
733	61
739	246
743	742
751	125
757	27
761	380
769	192
773	193
787	393
797	199
809	202
811	810
821	820
823	822
827	413
829	276
839	419
853	213
857	856
859	26
863	862
877	438
881	440

N	PL
883	441
887	886
907	151
911	455
919	459
929	464
937	936
941	940
947	473
953	952
967	322
971	970
977	976
983	982
991	495
997	166
1009	252
1013	253
1019	1018
1021	1020
1031	103
1033	1032
1039	519
1049	524
1051	1050
1061	212
1063	1062
1069	1068
1087	1086
1091	1090
1093	273
1097	1096
1103	1102
1109	1108
1117	558
1123	561
1129	564
1151	575
1153	1152
1163	581
1171	1170
1181	1180
1187	593
1193	1192
1201	200
1213	202
1217	1216
1223	1222
1229	1228
1231	41

N	PL
1237	206
1249	208
1259	1258
1277	638
1279	639
1283	641
1289	92
1291	1290
1297	1296
1301	1300
1303	1302
1307	653
1319	659
1321	55
1327	1326
1361	680
1367	1366
1373	686
1381	1380
1399	699
1409	32
1423	158
1427	713
1429	1428
1433	1432
1439	719
1447	1446
1451	290
1453	726
1459	162
1471	735
1481	740
1483	247
1487	1486
1489	248
1493	373
1499	214
1511	755
1523	761
1531	1530
1543	1542
1549	1548
1553	1552
1559	779
1567	1566
1571	1570
1579	1578
1583	1582
1597	133
1601	200