

List of Perfect numbers

Perfect numbers are generated by the formula $2^{p-1}(2^p - 1)$, where p and $2^p - 1$ are primes.

#	p	Perfect number	Digits	Year	Discoverer
1	2	6	1	?	
2	3	28	2	?	
3	5	496	3	?	
4	7	8,128	4	?	
5	13	33,550,336	8	1456	<i>anonymous</i>
6	17	8,589,869,056	10	1588	Cataldi
7	19	137,438,691,328	12	1588	Cataldi
8	31	2,305,843,008,139,952,128	19	1772	Euler
9	61	265845599...953842176	37	1883	Pervushin
10	89	191561942...548169216	54	1911	Powers
11	107	131640364...783728128	65	1914	Powers
12	127	144740111...199152128	77	1876	Lucas
13	521	235627234...555646976	314	1952	Robinson, using SWAC
14	607	141053783...537328128	366	1952	Robinson
15	1,279	541625262...984291328	770	1952	Robinson
16	2,203	108925835...453782528	1327	1952	Robinson
17	2,281	994970543...139915776	1373	1952	Robinson
18	3,217	335708321...628525056	1937	1957	Riesel, using BESK
19	4,253	182017490...133377536	2561	1961	Hurwitz, using IBM 7090
20	4,423	407672717...912534528	2663	1961	Hurwitz
21	9,689	114347317...429577216	5834	1963	Gillies, using ILLIAC II
22	9,941	598885496...073496576	5985	1963	Gillies
23	11,213	395961321...691086336	6751	1963	Gillies
24	19,937	931144559...271942656	12003	1971	Tuckerman, using IBM 360/91
25	21,701	100656497...141605376	13066	1978	Noll & Nickel, using CDC Cyber 174
26	23,209	811537765...941666816	13973	1979	Noll
27	44,497	365093519...031827456	26790	1979	Nelson & Slowinski
28	86,243	144145836...360406528	51924	1982	Slowinski
29	110,503	136204582...603862528	66530	1988	Colquitt & Welsh
30	132,049	131451295...774550016	79502	1983	Slowinski
31	216,091	278327459...840880128	130100	1985	Slowinski
32	756,839	151616570...565731328	455663	1992	Slowinski & Gage on Harwell Lab Cray-2
33	859,433	838488226...416167936	517430	1994	Slowinski & Gage
34	1257,787	849732889...118704128	757263	1996	Slowinski & Gage
35	1398,269	331882354...723375616	841842	1996	Armengaud, Woltman, et. al. (GIMPS)
36	2976,221	194276425...174462976	1791864	1997	Spence, Woltman, et. al. (GIMPS)
37	3021,377	811686848...022457856	1819050	1998	Clarkson, Woltman, Kurowski, et. al. (GIMPS)
38	6972,593	955176030...123572736	4197919	1999	Hajratwala, Woltman, Kurowski, et. al. (GIMPS)
39	13,466,917	427764159...863021056	8107892	2001	Cameron, Woltman, Kurowski, et. al. (GIMPS)
40 ?	20,996,011	793508909...206896128	12640858	2003	Shafer, Woltman, Kurowski, et. al. (GIMPS)
41 ?	24,036,583	448233026...572950528	14471465	2004	Findley, Woltman, Kurowski, et. al. (GIMPS)
42 ?	25,964,951	746209841...791088128	15632458	2005	Nowak, Woltman, Kurowski, et. al. (GIMPS)
43 ?	30,402,457	497437765...164704256	18304103	2005	Cooper, Boone, Woltman, Kurowski, et al. (GIMPS)
44 ?	32,582,657	775946855...577120256	19616714	2006	Cooper, Boone, Woltman, Kurowski, et al. (GIMPS)
45 ?	37,156,667	204534225...074480128	22370543	2008	Elvenich, Woltman, Kurowski, et al. (GIMPS)
46 ?	42,643,801	144285057...377253376	25674127	2009	Strindmo, Woltman, Kurowski, et al. (GIMPS)
47 ?	43,112,609	500767156...145378816	25956377	2008	Smith, Woltman, Kurowski, et al. (GIMPS)