Table 103: Running Differences in p and Mp and PN

Differences (Δ) in p and Mp & PN : Mersenne Prime & Perfect Numbers

previous p		Z		XZ	previous exponent x or z
p	Δ	2^p-1	Digits	Perfect Number	Δ
2		2^2-1	1	$2^1 \cdot (2^2-1)$	
3	1	2^3-1	1	$2^2 \cdot (2^3-1)$	1
5	2	2^5-1	2	$2^4 \cdot (2^5-1)$	2
7	2	2^7-1	3	$2^6 \cdot (2^7-1)$	2
13	6	$2^{13}-1$	4	$2^{12} \cdot (2^{13}-1)$	6
17	4	$2^{17}-1$	6	$2^{16} \cdot (2^{17}-1)$	4
19	2	$2^{19}-1$	6	$2^{18} \cdot (2^{19}-1)$	2
31	12	$2^{31}-1$	10	$2^{30} \cdot (2^{31}-1)$	12
61	30	$2^{61}-1$	19	$2^{60} \cdot (2^{61}-1)$	30
89	28	$2^{89}-1$	27	$2^{88} \cdot (2^{89}-1)$	28
107	18	$2^{107}-1$	33	$2^{106} \cdot (2^{107}-1)$	18
127	20	$2^{127}-1$	39	$2^{126} \cdot (2^{127}-1)$	20
521	394	$2^{521}-1$	157	$2^{520} \cdot (2^{521}-1)$	394
607	86	$2^{607}-1$	183	$2^{606} \cdot (2^{607}-1)$	86
1279	672	$2^{1,279}-1$	386	$2^{1,278} \cdot (2^{1,279}-1)$	672
2203	924	$2^{2,203}-1$	664	$2^{2,202} \cdot (2^{2,203}-1)$	924
2281	78	$2^{2,281}-1$	687	$2^{2,280} \cdot (2^{2,281}-1)$	78
3217	936	$2^{3,217}-1$	969	$2^{3,216} \cdot (2^{3,217}-1)$	936
4253	1036	$2^{4,253}-1$	1,281	$2^{4,252} \cdot (2^{4,253}-1)$	1036
4423	170	$2^{4,423}-1$	1,332	$2^{4,422} \cdot (2^{4,423}-1)$	170
9689	5266	$2^{9,689}-1$	2,917	$2^{9,688} \cdot (2^{9,689}-1)$	5266
9941	252	$2^{9,941}-1$	2,993	$2^{9,940} \cdot (2^{9,941}-1)$	252
11213	1272	$2^{11,213}-1$	3,376	$2^{11,212} \cdot (2^{11,213}-1)$	1272
19937	8724	$2^{19,937}-1$	6,002	$2^{19,936} \cdot (2^{19,937}-1)$	8724
21701	1764	$2^{21,701}-1$	6,533	$2^{21,700} \cdot (2^{21,701}-1)$	1764
23209	1508	$2^{23,209}-1$	6,987	$2^{23,208} \cdot (2^{23,209}-1)$	1508
44497	21288	$2^{44,497}-1$	13,395	$2^{44,496} \cdot (2^{44,497}-1)$	21288
86243	41746	$2^{86,243}-1$	25,962	$2^{86,242} \cdot (2^{86,243}-1)$	41746
110503	24260	$2^{110,503}-1$	33,265	$2^{110,502} \cdot (2^{110,503}-1)$	24260
132049	21546	$2^{132,049}-1$	39,751	$2^{132,048} \cdot (2^{132,049}-1)$	21546
216091	84042	$2^{216,091}-1$	65,050	$2^{216,090} \cdot (2^{216,091}-1)$	84042
756839	540748	$2^{756,839}-1$	227,832	$2^{756,838} \cdot (2^{756,839}-1)$	540748
859433	102594	$2^{859,433}-1$	258,716	$2^{859,432} \cdot (2^{859,433}-1)$	102594
1257787	398354	$2^{1,257,787}-1$	378,632	$2^{1,257,786} \cdot (2^{1,257,787}-1)$	398354
1398269	140482	$2^{1,398,269}-1$	420,921	$2^{1,398,268} \cdot (2^{1,398,269}-1)$	140482
2976221	1577952	$2^{2,976,221}-1$	895,932	$2^{2,976,220} \cdot (2^{2,976,221}-1)$	1577952
3021377	45156	$2^{3,021,377}-1$	909,526	$2^{3,021,376} \cdot (2^{3,021,377}-1)$	45156
6972593	3951216	$2^{6,972,593}-1$	2,098,960	$2^{6,972,592} \cdot (2^{6,972,593}-1)$	3951216
13466917	6494324	$2^{13,466,917}-1$	4,053,946	$2^{13,466,916} \cdot (2^{13,466,917}-1)$	6494324
20996011	7529094	$2^{20,996,011}-1$	6,320,430	$2^{20,996,010} \cdot (2^{20,996,011}-1)$	7529094
24036583	3040572	$2^{24,036,583}-1$	7,235,733	$2^{24,036,582} \cdot (2^{24,036,583}-1)$	3040572
25964951	1928368	$2^{25,964,951}-1$	7,816,230	$2^{25,964,950} \cdot (2^{25,964,951}-1)$	1928368
30402457	4437506	$2^{30,402,457}-1$	9,152,052	$2^{30,402,456} \cdot (2^{30,402,457}-1)$	4437506
32582657	2180200	$2^{32,582,657}-1$	9,808,358	$2^{32,582,656} \cdot (2^{32,582,657}-1)$	2180200
37156667	4574010	$2^{37,156,667}-1$	11,185,272	$2^{37,156,666} \cdot (2^{37,156,667}-1)$	4574010
42643801	5487134	$2^{42,643,801}-1$	12,837,064	$2^{42,643,800} \cdot (2^{42,643,801}-1)$	5487134
43112609	468808	$2^{43,112,609}-1$	12,978,189	$2^{43,112,608} \cdot (2^{43,112,609}-1)$	468808
57885161	14772552	$2^{57,885,161}-1$	17,425,170	$2^{57,885,160} \cdot (2^{57,885,161}-1)$	14772552
74207281	16322120	$2^{74,207,281}-1$	22,338,618	$2^{74,207,280} \cdot (2^{74,207,281}-1)$	16322120
77232917	3025636	$2^{77,232,917}-1$	23,249,425	$2^{77,232,916} \cdot (2^{77,232,917}-1)$	3025636
82589933	5357016	$2^{82,589,933}-1$	24,862,048	$2^{82,589,932} \cdot (2^{82,589,933}-1)$	5357016

* Provisional ranking, not all candidates between M57,885,161 and M82,589,933 have been eliminated.