

Table 126: $(x+z)^2 - 4 PN = y^2$ or z^2

line #	p	x	y	z	$(x+z)^2$	$xz=PN$	4PN	y^2 (GREEN) or z^2 (BLUE)	$z^2 - 1/24$
1	2	2	1	3	25	6	24	1	
2	3	4	3	7	121	28	112	9	
3		8	7	15	529	120	480	49	
4	5	16	15	31	2209	496	1984	225	9.33333333333333
5		32	31	63	9025	2016	8064	961	40
6	7	64	63	127	36481	8128	32512	3969	165.333333333333
7		128	127	255	146689	32640	130560	16129	672
8		256	255	511	588289	130816	523264	65025	2709.33333333333
9		512	511	1023	2356225	523776	2095104	261121	10880
10		1024	1023	2047	9431041	2096128	8384512	1046529	43605.3333333333
11		2048	2047	4095	37783649	8386560	33546240	4190209	174592
12	13	4096	4095	8191	150970369	33550336	134201344	16789025	698709.333333333
13		8192	8191	16383	603930625	134209536	536838144	67092481	2795520
14		16384	16383	32767	2415820801	536854528	2147418112	268402689	11183445.3333333
15		32768	32767	65535	9663479809	2147450800	8589803520	1073676289	44736512
16	17	65536	65535	131071	38654312449	8589869056	34359476224	4294836225	178951509.333333
17		131072	131071	262143	154618036225	34359607296	137438429184	17179607441	1715816960
18	19	262144	262143	524287	618473717761	137438691328	549754765312	68718952409	2863289685.33333
19		524288	524287	1048575	2473898016769	549755289600	2199021158400	274876858369	11453202432
20		1048576	1048575	2097151	9895598358529	2199022206976	8796088827904	1099509530625	45812897109.3333
21		2097152	2097151	4194303	39582406017025	8796090925056	35184363700224	4398042316801	183251763200
22		4194304	4194303	8388607	158329649233921	35184367894528	140737471578112	17592177655809	733007402325.333
23		8388608	8388607	16777215	633318647267329	140737479966720	562949919866880	70368727400449	2932030308352
24		16777216	16777215	33554431	2533274689732610	562949936644096	2251799746576380	281474943156230	11728122631509.5
25		33554432	33554431	67108863	10133098960257000	2251799780130820	9007199120523280	1125899839733720	
26		67108864	67108863	134217727	40532396243681300	9007199187632130	36028796750528500	4503599493152800	
27		134217728	134217727	268435455	16212958780031000	36028796884746200	144115187538985000	18014398241046000	
28		268435456	268435455	536870911	648518344730793000	144115187807420000	576460751229680000	72057593501059000	
29		536870912	536870911	1073741823	2594073382144180000	576460751766553000	2305843007066210000	28823037507970000	
30	31	1073741824	1073741823	214748367	10376293535019200000	2305843008139950000	9223372032559800000	1152921502459400000	
31		214748368	214748367	4294967295	41505174152961600000	9223372034707290000	36893488138829200000	4611686014132400000	
32		4294967296	4294967295	8589934591	166020696637616000000	36893488143124100000	147573952572496000000	18446744065120000000	
33		8589934592	8589934591	17179869183	664082786602004000000	147573952581086000000	590295810324344000000	73789676277660000000	
34		17179869184	17179869183	34359738367	265633114651100000000	590295810341526000000	236118324136610000000	29514790514500000000	
35		34359738368	34359738367	68719476735	1062532458625050000000	236118324140046000000	944473296560184000000	11805916206486600000	
36		68719476736	68719476735	137438953471	4250129834541450000000	944473296570570000000	377789318626823000000	47223664827322000000	
37		137438953472	137438953471	274877906943	1700051938248300000000	3777893186281970000000	151115727451279000000	18889465931204000000	
38		274877906944	274877906943	549755813887	6800207735315800000000	15111572745155400000000	604462909806216000000	75557863725364000000	
39		549755813888	549755813887	1099511627775	27200830941296200000000	60446290980676500000000	241785163922706000000	3022314549192056000000	
40		1099511627776	1099511627775	219902325551	108803323765251000000000	241785163922816000000000	9671406556912640000000	120892581961246000000	
41		219902325552	219902325551	439804651103	435213295061135000000000	967140655691483000000000	3868562622765930000000	483570327845420000000	
42		439804651104	439804651103	8796093022207	174085318024480000000000	386856262276637000000000	1547425049106550000000000	1934281311382500000000000	
43		8796093022208	8796093022207	17592186044415	6963412720979740000000000	15474250491066400000000000	618970019642656000000000000	773712524553180000000000000	
44		17592186044416	17592186044415	35184372088831	2785365088392000000000000	618970019642673000000000000	2475880078570990000000000000	3094850098213100000000000000	
45		35184372088832	35184372088831	70368744177663	111414603556862000000000000	247588007857300000000000000	990352031428292000000000000	1237940039285280000000000000	
46		70368744177664	70368744177663	14073748835327	445685841142733000000000000	990352031428297000000000000	3961408125713190000000000000	4951760157141400000000000000	
47		14073748835328	14073748835327	281474976710655	178263385675940000000000000	3961408125713200000000000000	1584563250285280000000000000	1980704062858600000000000000	
48		281474976710656	281474976710655	562949953421311	713053462837700000000000000	1584563250285290000000000000	6338253001141120000000000000	7928216251426500000000000000	
49		562949953421312	562949953421311	112589906842620	285213850513500000000000000	6338253001141120000000000000	2535012004564500000000000000	3169128500570500000000000000	
50		112589906842620	112589906842620	2251799813685240	1140885402054000000000000000	2535012004564400000000000000	10141204801825800000000000000	12768500022820000000000000000	
51		2251799813685240	2251799813685240	4503599627370480	4563542160821590000000000000	1014120480182580000000000000	4056481920730320000000000000	5070602409191700000000000000	
52		4503599627370480	4503599627370480	9007199254740960	1825418863288400000000000000	4056481920730310000000000000	16225927682921200000000000000	2028249096036200000000000000	
53		9007199254740960	9007199254740960	18014398509481900	73016674571345400000000000000	1622592768292120000000000000	64903710731684800000000000000	81129638414606000000000000000	
54		18014398509481900	18014398509481900	36028797018963800	29209989626258100000000000000	64903710731684700000000000000	2596148420267390000000000000	32451853684200000000000000000	
55		36028797018963800	36028797018963800	72057594037927600	11862667917030000000000000000	2596148420267390000000000000	10584937170860000000000000000	12980742146337000000000000000	
56		72057594037927600	72057594037927600	144115188075855000	46730671728129000000000000000	1058493717086000000000000000	41538374868278000000000000000	51822968583480000000000000000	
57		144115188075855000	144115188075855000	288230376151710000	18692869725200000000000000000	41538374868278100000000000000	16615349947312000000000000000	20768187434140000000000000000	
58		288230376151710000	288230376151710000	576460752303420000	74780674926960000000000000000	16615349947312000000000000000	66453987982448000000000000000	83076748736580000000000000000	
59		576460752303420000	576460752303420000	1152921504606840000	29907299051602000000000000000	66453987982448000000000000000	26584559915898000000000000000	33230988462200000000000000000	
60	61	1152921504606840000	1152921504606840000	2305843009213680000	1196305196206410000000000000000	26584559915898000000000000000	106338239627820000000000000000	133827995784900000000000000000	
61		2305843009213680000	2305843009213680000	4611686018427360000	478522078402540000000000000000	106338239627820000000000000000	425325985116800000000000000000	5316811983138600000000000000000	
62		4611686018427360000	4611686018427360000	9223372036854720000	191488531392600000000000000000	425325985116800000000000000000	1701418346048700000000000000000	212676419325900000000000000000	
63		9223372036854720000	9223372036854720000	18446744073709400000	765033257210000000000000000000	1701418346048700000000000000000	6805447384186800000000000000000	8507589172093000000000000000000	
64		18446744073709400000	18446744073709400000	36893488147418800000	3025413022984000000000000000000	6805447384186800000000000000000	2722258953674000000000000000000	3402826899400000000000000000000	
65		36893488147418800000	36893488147418800000	73789676294837600000	1225016529153000000000000000000	2722258953674000000000000000000	1089903571469800000000000000000	13611294768380000000000000000000	
66		73789676294837600000	73789676294837600000	147573952589675000000	4900060836614200000000000000000	1089903571469800000000000000000	43558142985870000000000000000000	5444518703500000000000000000000	
67		147573952589675000000	147573952589675000000	295147905179350000000	1980243444410000000000000000000	43558142985870000000000000000000	17425471803170000000000000000000	2178071463900000000000000000000	
68		295147905179350000000	295147905179350000000	590295810358700000000	7961057902670000000000000000000	17425471803170000000000000000000	68686267454900000000000000000000	87112059146300000000000000000000	
69		590295810358700000000	590295810358700000000	1180591620717400000000	3138042834510000000000000000000	68686267454900000000000000000000	27870014881630000000000000000000	34844914370300000000000000000000	
70		1180591620717400000000	1180591620717400000000	2361183241434800000000	10541891141732000000000000000000	27870014881630000000000000000000	111903758963100000000000000000000	13937890146000000000000000000000	
71		2361183241434800000000	2361183241434800000000	4722366482869600000000	1911037092				