

Table 91: BIM-MPS=ODD Σ

Table 91: ODD Σ forming $z^2 = \text{MPS}$ Consolidated				
	line-ODD- Σ ODD only works for contiguous Rows	z^2 MPS	z Mp	p $2^n - 1$
line	ODD	Running Σ ODD	Steps	Σ line #s in BG
1	1	1	1	
2	3	4	2	n=1
3	5	9	3	3
4	7	16	4	n=2
5	9	25	5	
6	11	36	6	
7	13	49	7	7
8	15	64	8	n=3
9	17	81	9	
10	19	100	10	
11	21	121	11	
12	23	144	12	
13	25	169	13	
14	27	196	14	
15	29	225	15	
16	31	256	16	n=4
17	33	289	17	
18	35	324	18	
19	37	361	19	
20	39	400	20	
21	41	441	21	
22	43	484	22	
23	45	529	23	
24	47	576	24	
25	49	625	25	
26	51	676	26	
27	53	729	27	
28	55	784	28	
29	57	841	29	
30	59	900	30	
31	61	961	31	31
32	63	1024	32	n=5
33	65	1089	33	
34	67	1156	34	
35	69	1225	35	
36	71	1296	36	
37	73	1369	37	
38	75	1444	38	
39	77	1521	39	
40	79	1600	40	
41	81	1681	41	
42	83	1764	42	
43	85	1849	43	
44	87	1936	44	
45	89	2025	45	
46	91	2116	46	
47	93	2209	47	
48	95	2304	48	
49	97	2401	49	
50	99	2500	50	
51	101	2601	51	
52	103	2704	52	
53	105	2809	53	
54	107	2916	54	
55	109	3025	55	
56	111	3136	56	
57	113	3249	57	
58	115	3364	58	
59	117	3481	59	
60	119	3600	60	
61	121	3721	61	
62	123	3844	62	
63	125	3969	63	
64	127	4096	64	n=6
65	129	4225	65	
66	131	4356	66	
67	133	4489	67	
68	135	4624	68	
69	137	4761	69	
70	139	4900	70	
71	141	5041	71	
72	143	5184	72	
73	145	5329	73	
74	147	5476	74	
75	149	5625	75	
76	151	5776	76	
77	153	5929	77	
78	155	6084	78	
79	157	6241	79	
80	159	6400	80	
81	161	6561	81	
82	163	6724	82	
83	165	6889	83	
84	167	7056	84	
85	169	7225	85	
86	171	7396	86	
87	173	7569	87	
88	175	7744	88	
89	177	7921	89	
90	179	8100	90	
91	181	8281	91	
92	183	8464	92	
93	185	8649	93	
94	187	8836	94	
95	189	9025	95	
96	191	9216	96	
97	193	9409	97	
98	195	9604	98	
99	197	9801	99	
100	199	10000	100	
101	201	10201	101	
102	203	10404	102	
103	205	10609	103	
104	207	10816	104	
105	209	11025	105	
106	211	11236	106	
107	213	11449	107	
108	215	11664	108	
109	217	11881	109	
110	219	12100	110	
111	221	12321	111	
112	223	12544	112	
113	225	12769	113	
114	227	12996	114	
115	229	13225	115	
116	231	13456	116	
117	233	13689	117	
118	235	13924	118	
119	237	14161	119	
120	239	14400	120	
121	241	14641	121	
122	243	14884	122	
123	245	15129	123	
124	247	15376	124	
125	249	15625	125	
126	251	15876	126	
127	253	16129	127	127
128	255	16384	128	n=7
129	257	16641	129	
				p=13 follows
256	511	65536	256	n=8
512	1023	262144	512	n=9
1024	2047	1048576	1024	n=10
2048	4095	4194304	2048	n=11
4096	8191	16777216	4096	n=12
				p=13 follows
8189	16377	67059721	8189	
8190	16379	67076100	8190	
8191	16381	67092481	8191	8191
8192	16383	67108864	8192	n=13
8193	16385	67125249	8193	
8194	16387	67141636	8194	
				p=17 follows
16384	32767	268435456	16384	n=14
32768	65535	1073741824	32768	n=15
65536	131071	4294967296	65536	n=16
				p=17 follows
131069	262137	17179082761	131069	
131070	262139	17179344900	131070	
131071	262141	17179607041	131071	131071
131072	262143	17179869184	131072	n=17
131073	262145	17180131329	131073	
131074	262147	17180393476	131074	
131075	262149	17180655625	131075	

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Table 91: ODD Σ forming $z^2 = \text{MPS}$ Consolidated				
line	line-ODD- Σ ODD only works for contiguous Rows	z^2 MPS	z Mp	p
	ODD	Running Σ ODD	Steps	Σ line #s in BG
			p=17 follows	
16384	32767	268435456	16384	n=14
32768	65535	1073741824	32768	n=15
65536	131071	4294967296	65536	n=16
			p=17 follows	
131069	262137	17179082761	131069	
131070	262139	17179344900	131070	
131071	262141	17179607041	131071	131071
131072	262143	17179869184	131072	n=17
131073	262145	17180131329	131073	
131074	262147	17180393476	131074	
			p=19 follows	
262142	524283	68718428164	262142	
262143	524285	68718952449	262143	
262144	524287	68719476736	262144	n=18
262145	524289	68720001025	262145	
262146	524291	68720525316	262146	
			p=19 follows	
524285	1048569	274874761225	524285	
524286	1048571	274875809796	524286	
524287	1048573	274876858369	524287	524287
524288	1048575	274877906944	524288	n=19
524289	1048577	274878955521	524289	
524290	1048579	274880004100	524290	
			p=31 follows	
1048576	2097151	1099511627776	1048576	n=20
2097152	4194303	4398046511104	2097152	n=21
4194304	8388607	17592186044416	4194304	n=22
8388608	16777215	70368744177664	8388608	n=23
16777216	33554431	281474976710656	16777216	n=24
33554432	67108863	...	33554432	n=25
67108864	134217727	...	67108864	n=26
134217728	268435455	...	134217728	n=27
268435456	536870911	...	268435456	n=28
536870912	1073741824	...	536870912	n=29
1073741824	2147483647	...	1073741824	n=30
			p=31 follows	
2147483645	4294967289	4611686005542486205	2147483645	
2147483646	4294967291	4611686009837453316	2147483646	
2147483647	4294967293	4611686014132420609	2147483647	2147483647
2147483648	4294967295	...	2147483648	n=31
2147483649	4294967297	...	2147483649	
2147483650	4294967299	...	2147483650	
			p=61 follows	
4294967296	8589934591	...	4294967296	n=32
8589934592	17179869183	...	8589934592	n=33
17179869184	34359738367	...	17179869184	n=34
34359738368	68719476735	...	34359738368	n=35
68719476736	137438953472	...	68719476736	n=36
137438953472	274877906944	...	137438953472	n=37
274877906944	549755813888	...	274877906944	n=38
549755813888	1099511627776	...	549755813888	n=39
1099511627776	2199023255552	...	1099511627776	n=40
2199023255552	4398046511103	...	2199023255552	n=41
4398046511104	8796093022208	...	4398046511104	n=42
8796093022208	17592186044416	...	8796093022208	n=43
17592186044416	35184372088832	...	17592186044416	n=44
35184372088832	70368744177664	...	35184372088832	n=45
70368744177664	14073748835328	...	70368744177664	n=46
14073748835328	281474976710656	...	14073748835328	n=47
281474976710656	56294953421312	...	281474976710656	n=48
56294953421312	1125899906842624	...	56294953421312	n=49
1125899906842624	2251799813685248	...	1125899906842624	n=50
2251799813685248	4503599627370496	...	2251799813685248	n=51
4503599627370496	9007199254740992	...	4503599627370496	n=52
9007199254740992	18014398509481984	...	9007199254740992	n=53
18014398509481984	36028797018963968	...	18014398509481984	n=54
36028797018963968	72057594037927936	...	36028797018963968	n=55
72057594037927936	144115188075855872	...	72057594037927936	n=56
144115188075855872	288230376151711744	...	144115188075855872	n=57
288230376151711744	576460752303423488	...	288230376151711744	n=58
576460752303423488	1152921504606846976	...	576460752303423488	n=59
1152921504606846976	2305843009213693952	...	1152921504606846976	n=60
			p=61 follows	
2305843009213693949	4611686018427387897	5316911983139663477780 170185839214601	2305843009213693949	
2305843009213693950	4611686018427387899	5316911983139663482391 856204266602500	2305843009213693950	
2305843009213693951	4611686018427387901	5316911983139663487000 54222693990401	2305843009213693951	2305843009213693952
2305843009213693952	4611686018427387903	...	2305843009213693952	n=61
2305843009213693953	4611686018427387905	...	2305843009213693953	
2305843009213693954	4611686018427387907	...	2305843009213693954	
			p=69 follows	
4611686018427387904	9223372036854775807	...	4611686018427387904	n=62
9223372036854775808	18446744073709551616	...	9223372036854775808	n=63
18446744073709551616	36893488147419103232	...	18446744073709551616	n=64
36893488147419103232	73786976294838206464	...	36893488147419103232	n=65
73786976294838206464	147573952589676412928	...	73786976294838206464	n=66
147573952589676412928	295147905179352825856	...	147573952589676412928	n=67
295147905179352825856	590295810358705651712	...	295147905179352825856	n=68
590295810358705651712	1180591620717411303424	...	590295810358705651712	n=69
1180591620717411303424	2361183241434822606848	...	1180591620717411303424	n=70
2361183241434822606848	4722366482869645213696	...	2361183241434822606848	n=71
4722366482869645213696	9444732965739290427392	...	4722366482869645213696	n=72
9444732965739290427392	18889465931478580854784	...	9444732965739290427392	n=73
18889465931478580854784	37778931862957161709567	...	18889465931478580854784	n=74
37778931862957161709567	75557863725914323419136	...	37778931862957161709567	n=75
75557863725914323419136	151115727451828646838272	...	75557863725914323419136	n=76
151115727451828646838272	302231454903657293676544	...	151115727451828646838272	n=77
302231454903657293676544	604462909807314587353088	...	302231454903657293676544	n=78
604462909807314587353088	1208925819614629174706176	...	604462909807314587353088	n=79
1208925819614629174706176	2417851639229258349412352	...	1208925819614629174706176	n=80
2417851639229258349412352	4835703278458516698824704	...	2417851639229258349412352	n=81
4835703278458516698824704	967140655691703397649408	...	4835703278458516698824704	n=82
967140655691703397649408	19342813113834066795298816	...	967140655691703397649408	n=83
19342813113834066795298816	38685626227668133590597632	...	19342813113834066795298816	n=84
38685626227668133590597632	77371252455336267181195263	...	38685626227668133590597632	n=85
77371252455336267181195263	154742504910672534362390527	...	77371252455336267181195263	n=86
154742504910672534362390527	309485009821345068724781056	...	154742504910672534362390527	n=87
309485009821345068724781056	618970019642690137449562111	...	309485009821345068724781056	n=88
618970019642690137449562111	618970019642690137449562111	n=89
			p=89 follows	
618970019642690137449562109	1237940039285380274899124217	5316911983139663477780 170185839214601	618970019642690137449562109	
618970019642690137449562110	1237940039285380274899124219	3831238852164722145895 8675431169721733392423 0747652100	618970019642690137449562110	
618970019642690137449562111	1237940039285380274899124221	9831238852164722145895 867554963725661930450 5646776321	618970019642690137449562111	2147483647
618970019642690137449562112	1237940039285380274899124223	...	618970019642690137449562112	n=89
618970019642690137449562113	1237940039285380274899124225	...	618970019642690137449562113	
618970019642690137449562114	1237940039285380274899124227	...	618970019642690137449562114	
			p=107 follows	

line # with BG being +1 ahead of Mp & MPS, i.e. line # - 1 = line # of Mp = z and when squared = z² = MPS
 e.i. line #3 as 8-1=7=z and z²=49=MPS of p=3=line#
 NOTE: the line # = p, i.e. the Σ number of doubling steps to the NEXT Mp - MPS starting from 0.
 Σ line# = p
 Of course, this means that if you know you are going from p=7 to p=13, then 13-7=6 line# steps from 7 to 13.
 Each of those 6-1=5 line steps in between are natural 2ⁿ steps, but only the BG lines-1 = Mp & MPS locations.
 Remember that these are the 2ⁿ steps and the "line#-p" is ONLY for this array when ONLY the 2ⁿ lines are listed.
 In Table 90 and 91, the NON-2ⁿ lines are also included and do NOT follow this NPS!!!!!! The extra NON-2ⁿ lines are included in order for the NUMBERS FORMULA to work.

- 1 x 2 = 2
- 2 x 2 = 4 p=2
- 4 x 2 = 8 p=3
- 8 x 2 = 16
- 16 x 2 = 32 p=5
- 32 x 2 = 64
- 64 x 2 = 128 p=7
- 128 x 2 = 256
- 256 x 2 = 512
- 512 x 2 = 1024
- 1024 x 2 = 2048
- 2048 x 2 = 4096
- 4096 x 2 = 8192 p=13
- 8192 x 2 = 16384
- 16384 x 2 = 32768
- 32768 x 2 = 65536
- 65536 x 2 = 131072 p=17
- 131072 x 2 = 262144
- 262144 x 2 = 524288 p=19
- 524288 x 2 = 1048576
- 1048576 x 2 = 2097152
- 2097152 x 2 = 4194304
- 4194304 x 2 = 8388608
- 8388608 x 2 = 16777216
- 16777216 x 2 = 33554432
- 33554432 x 2 = 67108864
- 67108864 x 2 = 134217728
- 134217728 x 2 = 268435456
- 268435456 x 2 = 536870912
- 536870912 x 2 = 1073741824
- 1073741824 x 2 = 2147483648 p=31
- 2147483648 x 2 = 4294967296
- 4294967296 x 2 = 8589934592
- 8589934592 x 2 = 17179869184
- 17179869184 x 2 = 34359738368
- 34359738368 x 2 = 68719476736
- 68719476736 x 2 = 137438953472
- 137438953472 x 2 = 274877906944
- 274877906944 x 2 = 549755813888
- 549755813888 x 2 = 1099511627776
- 1099511627776 x 2 = 2199023255552
- 2199023255552 x 2 = 4398046511104
- 4398046511104 x 2 = 8796093022208
- 8796093022208 x 2 = 17592186044416
- 17592186044416 x 2 = 35184372088832
- 35184372088832 x 2 = 70368744177664
- 70368744177664 x 2 = 14073748835328
- 14073748835328 x 2 = 281474976710656
- 281474976710656 x 2 = 56294953421312
- 56294953421312 x 2 = 1125899906842624
- 1125899906842624 x 2 = 2251799813685248
- 2251799813685248 x 2 = 4503599627370496
- 4503599627370496 x 2 = 9007199254740992
- 9007199254740992 x 2 = 18014398509481984
- 18014398509481984 x 2 = 36028797018963968
- 36028797018963968 x 2 = 72057594037927936
- 720575940379279