

Table 135:  $p=\ln(2x)/\ln(2)$  sequential with ALL “containers”

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n	p	$z = 2^p - 1 = Mp$	$x = 2^{p-1} = 2^{p/2}$	$p = \ln(2x)/\ln(2)$	$*p = [\ln(x^2)/\ln(2)]+1$	$p \cdot *p = xz = PN$
1	2	3	2	2	3	6
2	3	7	4	3	5	15
3	4	15	8	4	7	28
4	5	31	16	5	9	45
5	6	63	32	6	11	66
6	7	127	64	7	13	91
7	8	255	128	8	15	120
8	9	511	256	9	17	153
9	10	1023	512	10	19	190
10	11	2047	1024	11	21	231
11	12	4095	2048	12	23	276
12	13	8191	4096	13	25	325
13	14	16383	8192	14	27	378
14	15	32767	16384	15	29	435
15	16	65535	32768	16	31	496
16	17	131071	65536	17	33	561
17	18	262143	131072	18	35	630
18	19	524287	262144	19	37	703
19	20	1048575	524288	20	39	780
20	21	2097151	1048576	21	41	861
21	22	4194303	2097152	22	43	946
22	23	8388607	4194304	23	45	1035
23	24	16777215	8388608	24	47	1128
24	25	33554431	16777216	25	49	1225
25	26	67108863	33554432	26	51	1326
26	27	134217727	67108864	27	53	1431
27	28	268435455	134217728	28	55	1540
28	29	536870911	268435456	29	57	1653
29	30	1073741823	536870912	30	59	1770
30	31	2147483647	1073741824	31	61	1891
31	32	4294967295	2147483648	32	63	2016
32	33	8589934591	4294967296	33	65	2145
33	34	17179869183	8589934592	34	67	2278
34	35	34359738367	17179869184	35	69	2415
35	36	68719476735	34359738368	36	71	2556
36	37	137438953471	68719476736	37	73	2701
37	38	274877906943	137438953472	38	75	2850
38	39	549755813887	274877906944	39	77	3003
39	40	1099511627775	549755813888	40	79	3160
40	41	2199023255551	1099511627776	41	81	3321
41	42	4398046511103	2199023255552	42	83	3486
42	43	8796093022207	4398046511104	43	85	3655
43	44	17592186044415	8796093022208	44	87	3828
44	45	35184372088831	17592186044416	45	89	4005
45	46	70368744177663	35184372088832	46	91	4186
46	47	140737488355327	70368744177664	47	93	4371
47	48	281474976710655	140737488355328	48	95	4560
48	49	562949953421311	281474976710656	49	97	4753
49	50	1125899906842623	562949953421312	50	99	4950
50	51	2251799813685247	1125899906842624	51	101	5151
51	52	9007199254740991	2251799813685248	52	103	5356
52	53	9007199254740991	4503599627370496	53	105	5565
53	54	18014398509481983	9007199254740992	54	107	5778
54	55	36028797018963967	18014398509481984	55	109	5995
55	56	72057594037927935	36028797018963968	56	111	6216
56	57	144115188075855871	72057594037927936	57	113	6441
57	58	288230376151711743	144115188075855872	58	115	6670
58	59	576460752303423487	288230376151711744	59	117	6903
59	60	1152921504606846975	576460752303423488	60	119	7140
60	61	2305843009213693951	1152921504606846976	61	121	7381
61	62	4611686018427387903	2305843009213693952	62	123	7626
62	63	9223372036854775807	4611686018427387904	63	125	7875
63	64	18446744073709551615	9223372036854775808	64	127	8128

**Table 135: with “containers”**  
 Table 135: with “containers” The “p” value for “x”:  $p=\ln(2x)/\ln(2)$  is found on the same line as “x.”  
 The “\*p” value for “x<sup>2</sup>”:  $p=[\ln(x^2)/\ln(2)]+1$  is found for the squared “x” value, e.i. let  $x=4$ ,  $x^2=16$ , and  $p=5$ . The \*p advances as  $2p-1$ .  $p \cdot *p = xz = PN$ .  $x^2$  found  $p-1$  STEPS from x. At  $p \geq 5$ ,  $xz$  found @  $p=x$ .  
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n	p	$z = 2^p - 1 = Mp$	$x = 2^{p-1} = 2^{p/2}$	$p = \ln(2x)/\ln(2)$	$*p = [\ln(x^2)/\ln(2)]+1$	$p \cdot *p = xz = PN$
1	61	2305843009213693951	1152921504606846976	61	121	7381
61	62	4611686018427387903	2305843009213693952	62	123	7626
62	63	9223372036854775807	4611686018427387904	63	125	7875
63	64	18446744073709551615	9223372036854775808	64	127	8128
64	65	36893488147419103231	18446744073709551616	65	129	8385
65	66	73786976294838206463	36893488147419103232	66	131	8646
66	67	147573952589676412927	73786976294838206464	67	133	8911
67	68	295147905179352825855	147573952589676412928	68	135	9180
68	69	590295810358705651711	295147905179352825855	69	137	9453
69	70	1180591620717411303423	590295810358705651712	70	139	9730
70	71	2361183241434822606847	1180591620717411303424	71	141	10011
71	72	4722366482869645213695	2361183241434822606848	72	143	10296
72	73	9444732965739290427391	4722366482869645213696	73	145	10585
73	74	18889465931478580854783	9444732965739290427392	74	147	10878
74	75	37778931862957161709567	18889465931478580854784	75	149	11175
75	76	75557863725914323419135	37778931862957161709568	76	151	11476
76	77	151115727451828646838271	75557863725914323419136	77	153	11781
77	78	302231454903657293676543	151115727451828646838272	78	155	12090
78	79	604462909807314587353087	302231454903657293676544	79	157	12403
79	80	1208925819614629174706175	604462909807314587353088	80	159	12720
80	81	2417851639229258349412351	1208925819614629174706176	81	161	13041
81	82	4835703278458516698824703	2417851639229258349412352	82	163	13366
82	83	9671406556917033397649407	4835703278458516698824704	83	165	13695
83	84	1.93428131138341E+25	9.67140655691705E+24	8.4E+01	1.67E+02	1.4028E+04
84	85	3.86856262276682E+25	1.93428131138341E+25	8.5E+01	1.69E+02	1.4365E+04
85	86	7.73712524553364E+25	3.86856262276682E+25	8.6E+01	1.71E+02	1.4706E+04
86	87	1.54742504910673E+26	7.73712524553365E+25	8.7E+01	1.73E+02	1.5051E+04
87	88	3.09485009821346E+26	1.54742504910673E+26	8.8E+01	1.75E+02	1.54E+04
88	89	61897001964269013744956211	3.09485009821345E+26	89	1.77E+02	15753
89	90	1.23794003928538E+27	6.1897001964269E+26	9E+01	1.79E+02	1.611E+04
90	91	2.47588007857076E+27	1.23794003928538E+27	9.1E+01	1.81E+02	1.6471E+04
91	92	4.95176015714152E+27	2.47588007857076E+27	9.2E+01	1.83E+02	1.6836E+04
92	93	9.90352031428304E+27	4.95176015714152E+27	9.3E+01	1.85E+02	1.7205E+04
93	94	1.98070406285661E+28	9.90352031428305E+27	9.4E+01	1.87E+02	1.7578E+04
94	95	3.96140812571322E+28	1.98070406285661E+28	9.5E+01	1.89E+02	1.7955E+04
95	96	7.92281625142644E+28	3.96140812571322E+28	9.6E+01	1.91E+02	1.8336E+04
96	97	1.58456325028529E+29	7.92281625142645E+28	9.7E+01	1.93E+02	1.8721E+04
97	98	3.16912650057058E+29	1.58456325028529E+29	9.8E+01	1.95E+02	1.911E+04
98	99	6.33825300114116E+29	3.16912650057058E+29	9.9E+01	1.97E+02	1.9503E+04
99	100	1.26765060022823E+30	6.33825300114115E+29	1E+02	1.99E+02	1.99E+04
100	101	2.53530120045646E+30	1.26765060022823E+30	1.01E+02	2.01E+02	2.0301E+04
101	102	5.07060240091292E+30	2.53530120045646E+30	1.02E+02	2.03E+02	2.0706E+04
102	103	1.01412048018258E+31	5.0706024009129E+30	1.03E+02	2.05E+02	2.1115E+04
103	104	2.02824096036516E+31	1.01412048018258E+31	1.04E+02	2.07E+02	2.1528E+04
104	105	4.05648192073032E+31	2.02824096036516E+31	1.05E+02	2.09E+02	2.1945E+04
105	106	8.11296384146064E+31	4.05648192073032E+31	1.06E+02	2.11E+02	2.2366E+04
106	107	162259276829213363391578010288127	8.11296384146067E+31	107	2.13E+02	22791
107	108	3.24518553658427E+32	1.62259276829214E+32	1.08E+02	2.15E+02	2.322E+04
108	109	6.49037107316854E+32	3.24518553658427E+32	1.09E+02	2.17E+02	2.3653E+04
109	110	1.29807421463371E+33	6.49037107316855E+32	1.1E+02	2.19E+02	2.409E+04
110	111	2.59614842926742E+33	1.29807421463371E+33	1.11E+02	2.21E+02	2.4531E+04
111	112	5.19229685853484E+33	2.59614842926742E+33	1.12E+02	2.23E+02	2.4976E+04
112	113	1.03845937170697E+34	5.19229685853485E+33	1.13E+02	2.25E+02	2.5425E+04
113	114	2.07691874341394E+34	1.03845937170697E+34	1.14E+02	2.27E+02	2.5878E+04
114	115	4.15383748682788E+34	2.07691874341394E+34	1.15E+02	2.29E+02	2.6335E+04
115	116	8.30767497365576E+34	4.15383748682788E+34	1.16E+02	2.31E+02	2.6796E+04
116	117	1.66153499473115E+35	8.30767497365575E+34	1.17E+02	2.33E+02	2.7261E+04
117	118	3.3230699894623E+35	1.66153499473115E+35	1.18E+02	2.35E+02	2.773E+04
118	119	6.6461399789246E+35	3.3230699894623E+35	1.19E+02	2.37E+02	2.8203E+04
119	120	1.32922799578492E+36	6.6461399789246E+35	1.2E+02	2.39E+02	2.868E+04
120	121	2.65845599156984E+36	1.32922799578492E+36	1.21E+02	2.41E+02	2.9161E+04
121	122	5.31691198313968E+36	2.65845599156984E+36	1.22E+02	2.43E+02	2.9646E+04
122	123	1.06338239662794E+37	5.3169119831397E+36	1.23E+02	2.45E+02	3.0135E+04
123	124	2.12676479325588E+37	1.06338239662794E+37	1.24E+02	2.47E+02	3.0628E+04
124	125	4.25352958651176E+37	2.12676479325588E+37	1.25E+02	2.49E+02	3.1125E+04
125	126	8.50705917302352E+37	4.25352958651176E+37	1.26E+02	2.51E+02	3.1626E+04
126	127	170141183460469231731687303715884105727	8.50705917302346E+37	127	2.53E+02	32131
p		$z = 2^p - 1 = Mp$	$x = 2^{p-1} = 2^{p/2}$	$p = \ln(2x)/\ln(2)$	$*p = [\ln(x^2)/\ln(2)]+1$	$p \cdot *p = xz = PN$

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 The \*p advances as  $2p-1$ .  $p \cdot *p = xz = PN$ .  $x^2$  found  $p-1$  STEPS from x. At  $p \geq 5$ ,  $xz$  found @  $p=x$ .  
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