

p	$\Sigma=p$	1	2	4	8	16	32	64	128	256	512	1024	2048	4096	$Mp = 2^p-1=z$							
1	1=1	•								BF1 ends with 1					3							
3	1+2=3	•	•							BF1 ends with 2					7							
5	1+4=5	•		•						BF1 ends 4: 2@4 & 1@2 & 2@1					31							
7	1+2+4=7	•	•	•						Running Sum (Σ) when BF1 ends with 8: 4@8 2@4 2@2 4@1					127							
9	1+8=9	•			•										511							
11	1+2+8	•	•		•											2047						
13	1+4+8=13	•		•	•												8191					
15	1+2+4+8=15	•	•	•	•					32767												
17	1+16=17	•				•					Running Sum (Σ) when BF1 ends with 16: 8@16 4@8 4@4 4@2 8@1	131071										
19	1+2+16=19	•	•			•						524287										
21	1+4+16=21	•		•		•							2097151									
23	1+2+4+16=23	•	•	•		•				8388607												
25	1+8+16=25	•			•	•								33554431								
27	1+2+8+16=27	•	•		•	•									134217727							
29	1+4+8+16=29	•		•	•	•					536870911											
31	1+2+4+8+16=31	•	•	•	•	•						2147483647										
33	1+32=33	•					•						Running Sum (Σ) when BF1 ends with 32: 16@32 8@16 8@8 8@4 8@2 16@1			8589934591						
35	1+2+32=35	•	•				•			34359738367												
37	1+4+32=37	•		•			•							137438953471								
39	1+2+4+32=39	•	•	•			•								549755813887							
41	1+8+32=41	•			•		•				2199023255551											
43	1+2+8+32=43	•	•		•		•					8796093022207										
45	1+4+8+32=45	•		•	•		•									35184372088831						
47	1+2+4+8+32=47	•	•	•	•		•										140737488355327					
49	1+16+32=49	•				•	•											1125899906842623				
51	1+2+16+32=51	•	•			•	•															
53	1+4+16+32=53	•		•		•	•															
55	1+2+4+16+32=55	•	•	•		•	•															
57	1+8+16+32=57	•			•	•	•															
59	1+2+8+16+32=59	•	•		•	•	•															
61	1+4+8+16+32=61	•		•	•	•	•															
63	1+2+4+8+16+32=63	•	•	•	•	•	•															
65	1+64=65	•		•				•														
67	1+2+64=67	•	•					•														
69	1+4+64=69	•		•				•														
71	1+2+4+64=71	•	•	•				•														
73	1+8+64=73	•			•			•														
75	1+2+8+64=75	•	•		•			•														
77	1+4+8+64=77	•		•	•			•														
79	1+2+4+8+64=79	•	•	•	•			•														
81	1+16+64=81	•		•		•		•														
83	1+2+16+64=83	•	•			•		•														
85	1+4+16+64=85	•		•		•		•														
87	1+2+4+16+64=87	•	•	•		•		•														
89	1+8+16+64=89	•		•	•	•		•														
91	1+2+8+16+64=91	•	•		•	•		•		Running Sum (Σ) when BF1 ends with 64: 32@64 16@32 16@16 16@8 16@4 16@2 32@1												
93	1+4+8+16+64=93	•		•	•	•		•														

Table 189a	Table 189a: Running Sums (Σ)=p ODDs. The Σ of some select combination of the BF1=p ODDs follow a distinct number pattern distribution. Start with ALL ODD “p” values in Column 1. What select combination of the BF1 sequence — (1)-2-4-8-16-32-64-128-... will sum up to equal that “p” value? They fall into groups as shown by the colored blocks. The members of the block all end with the same highest BF1 value. When you profile the number distribution within each block you get the results shown in the wide Columns of each respective colored block. There will always be 1/2 the highest value number of that value, and 1/2 again (or 1/4) for each of the lesser BF1 values selected, e.i. Running Sum (Σ) when BF1 ends with 15: 8/2=4 —> 4@8 8/4=2 —> 2@4 and —> 2@2 and 4@1. When p=9, 11, 13, 15: ALL 4 have end with 8, while 2 of the 4 contain a BF1 4 value, 2 contain a BF1 2 value and 4@1, with p=15 having all four BF1 values — 1-2-4-8. Copyright©2025, Reginald Brooks, Brooks Design. All rights reserved.
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