



The curved BLACK arc lines follow the exponential power of 2 --- 2^n .

The Exponential Power of 2 as it interferes with the MPS

The thin dotted BLACK lines show that the exponential power of 2 --- 2^n --- falls midway --- in the center --- of the PNS along the way to the next MPS or PN crossing on the PD. See BIM-MPS: Details, Part II.

The YELLOW and GREEN lines follow the Running Sums ($\Sigma=z=Mp$) of the exponential power of 2 --- 2^n .

Follow the Running Sums ($\Sigma=z=Mp$) of the exponential power of 2 --- $2^n=x$ as $z=2^2-1=3$ the YELLOW line goes to the square of $3=9$ = MPS on the PD @ $p=2$; under the 9 is 7 and a GREEN line runs diagonally from it to the $7=z=2^3-1$ on the Axis; a YELLOW line goes to the square of $7=49$ = MPS on the PD @ $p=3$; below 49 is 15 and a GREEN line runs diagonally to $15=z=2^4-1$ on the Axis; a YELLOW line goes to the square of $15=225$ on the PD; under the 225 is 31; a GREEN line runs diagonally from it to $31=z=2^5-1$ on the Axis; a YELLOW line goes to the square of $31=961$ = MPS on the PD @ $p=5$; ...

Table 81: Mersenne Prime Squares - Butterfly Fractals

n	p	Mp = p-1	Mp^2 = MPS	z = 2^n - 1	z^2 = z^2	z^2 - 1	z^2 - 1	z^2 - 1
2	2	1	1	3	9	7	7	7
3	3	2	4	7	49	15	15	15
5	5	4	16	15	225	31	31	31
7	7	6	36	31	961	63	63	63

Table 81: Mersenne Prime Squares: 9 parameters of the First 12 Mersenne Primes. Copyright©2021, Reginald Brooks, Brooks Design. All rights reserved.

The first four Mersenne PRIME - Perfect Number Squares on the BIM