Structural invariants of Collatz, 3n + 1 function (First 25 Odd Numbers can be extended infinitely)

Position	Odd Number	3n + 1	Result	Powers of 2 × m
1	1	3×1 + 1	4	2^2 × 1
2	3	3×3 + 1	10	2^1 × 5
3	**5**	**3×5 + 1**	**16**	**2^2 × 4**
4	7	3×7 + 1	22	2^1 × 11
5	9	3×9 + 1	28	2^2 × 7
6	11	3×11 + 1	34	2^1 × 17
7	**13**	**3×13 + 1**	**40**	**2^2 × 10**
8	15	3×15 + 1	46	2^1 × 23
9	17	3×17 + 1	52	2^2 × 13
10	19	3×19 + 1	58	2^1 × 29
11	**21**	**3×21 + 1**	**64**	**2^2 × 16**
12	23	3×23 + 1	70	2^1 × 35
13	25	3×25 + 1	76	2^2 × 19
14	27	3×27 + 1	82	2^1 × 41
15	**29**	**3×29 + 1**	**88**	**2^2 × 22**
16	31	3×31 + 1	94	2^1 × 47
17	33	3×33 + 1	100	2^2 × 25
18	35	3×35 + 1	106	2^1 × 53
19	**37**	**3×37 + 1**	**112**	**2^2 × 28**

20	39	3×39 + 1	118	2^1 × 59
21	41	3×41 + 1	124	2^2 × 31
22	43	3×43 + 1	130	2^1 × 65
23	**45**	**3×45 + 1**	**136**	**2^2 × 34**
24	47	3×47 + 1	142	2^1 × 71
25	49	3×49 + 1	148	2^2 × 37

- On even positions there is a clear arithmetic sequence 2^1 (5, 11,17,23…)
- On 1mod4 positions there is sequence look like 2^2(1,7,13,19…)
- On 3mod4 positions function is looping back to original function, its scaled copy of a function itself 4(3n+1)