$A(x) = \sum_{k=0}^{\infty} C^k F(x^{2^k})$

$C, F(\xi)$	a_{2n}	a_{2n+1}		
$1, \frac{\xi^2}{1-\xi^2}$	$a_n + 1$	0	$v_2(n)$	A007814
$1, \frac{\xi}{1-\xi}$	$a_n + 1$	1	$v_2(n) + 1, A007814 + 1$	A001511
$1, \frac{\xi}{1+\xi}$	$a_n - 1$	1	$1 - v_2(n), \Delta e_1$	A088705
$1, \frac{\xi^2}{1+\xi}$	$a_n + 1$	-1	$v_2(n) - 1 + [n = 2^k], \Delta e_0$	—
$-1, \frac{\xi}{1-\xi}$	$-a_n + 1$	1	$\frac{1}{2}(1 + (-1)^{v_2}), v_2(2n) \bmod 2$	A035263
$2, \frac{\xi}{1-\xi}$	$2a_n + 1$	1	nim-sum, $2 \cdot 2^{v_2} - 1$	A038712
$3, \frac{3}{1-\xi}$	$3a_n + 3$	3	(Catalan mod3), $(3^{v_2+2} - 1)/2 - 1$	A085296
$2, \frac{\xi}{1-\xi^2}$	$2a_n$	1	2^{v_2}	A006519
$3, \frac{\xi}{1-\xi^2}$	$3a_n$	1	$A061393 - 1, 3^{v_2} + 1$	—
$4,$	$4a_n + 3$	7	$8 \cdot 4^{v_2} - 1$	A065916
$1, \frac{\xi}{1-2\xi^2}$	a_n	2^n	$A082392(n+1), 2^{A025480}$	—
$2, \frac{\xi}{(1-\xi)^2}$	$2a_n + 2n$	$2n + 1$	2^{a_n} divides $(2n)^n$	—
$2, \frac{2\xi}{(1-\xi)^2}$	$2a_n + 4n$	$4n + 2$	2^{a_n} divides $(2n)^{2n}$	A069895
$1, \frac{\xi}{(1-\xi^2)^2}$	a_n	n	$A003602(n-1)$	—
$1, \frac{2\xi}{(1-\xi^2)^2}$	a_n	$2n + 1$	$A000265 + 1$	—
$2, \frac{\xi^3-\xi^2+\xi+1}{(1-\xi^2)^2}$	$2a_n + 1$	n	switch trailing 0s, $n + 2^{v_2} - 1$	A086799
$2, \frac{6\xi^7+\xi^5+2\xi^3+3\xi}{(1-\xi^4)^2}$	$2a_n$	$4n + 3//8n + 2$	$a(a(n)) = 2n$	A002516
$1, \frac{\xi(1+2\xi-2\xi^2)}{(1-2\xi)(1-\xi^2)}$	$a_n + 2^{2n}$	$2^{2n+1} - 1$	$A045654 - 1$	—
$1, \frac{\xi}{1+\xi+\xi^2}$	$a_n + 1 - (n + 1 \bmod 3)$	$1 - (n \bmod 3)$		A084091

$A(x) = \frac{1}{1-x}\left(B(x) + \sum_{k=0}^{\infty} C^k F(x^{2^k})\right)$

$B(x)$	$C, F(\xi)$	a_{2n}	a_{2n+1}		
	$1, \xi$	$a_n + 1$	$a_n + 1$	bin. length of n, $A000523 + 1$	A070939
$1+$	$1, \xi$	$[1]\, a_n + 1$	$a_n + 1$	bin. length of $2n+1$	A070941
	$2, \xi$	$2a_n + 1$	$2a_n + 1$	a_{n-1} OR n	A003817
$1+$	$2, \xi$	$[1]\, 2a_n$	$2a_n$	$2 \cdot 2^{\lfloor \lg n \rfloor}$	A062383
	$-1, \xi$	$-a_n + 1$	$-a_n + 1$	runs of length 2^k	A030300
	$2, \xi(1-\xi)$	$[0,1]\, 2a_n$	$2a_n$	msb, $2^{\lfloor \lg n \rfloor}$	A053644
	$2,$	$[2]\, 2a_n - 1$	$2a_n - 1$	$1 + 2^{\lfloor \lg n+1 \rfloor}$	A076877
$\frac{x-2x^2}{1-x}+$	$2, 3\xi^2$	$[0,1]\, 2a_n + 1$	$2a_n$		A054429
	$2, \frac{\xi}{1+\xi}$	$2a_n$	$2a_n + 1$	**N**	A000027
	$2, \frac{\xi^2}{1+\xi}$	$2a_n + 1$	$2a_n$	$-(n+1) + 2 \cdot 2^{\lfloor \lg n \rfloor}$	(A035327)
$1+$	$2, \frac{\xi+2\xi^2}{1+\xi}$	$[1]\, 2a_n + 1$	$2a_n$	$-(n+1) + 4 \cdot 2^{\lfloor \lg n \rfloor}$	(A010078)
	$2,$	$2a_n$	$2a_n + 1 + [n == 0]$	$n + 2^{\lfloor \lg n \rfloor}$, $(A004761)$	A004754
$1+$	$2, \frac{2\xi+\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 2[n == 0]$	$n + 2 \cdot 2^{\lfloor \lg n \rfloor}$, $(A004760)$	A004755
		$2a_n$	$2a_n + 1 + 3[n == 0]$		A004756
$2+$	$2, \frac{3\xi+2\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 4[n == 0]$	does start 101	A004757
		$2a_n$	$2a_n + 1 + 5[n == 0]$	does start 110	A004758
$3+$	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 6[n == 0]$	does start 111	A004759
	$2,$	$2a_n$	$2a_n + 2 + 4[n == 0]$	Aronson-like, $2n + 4 \cdot 2^{\lfloor \lg n \rfloor}$	A0079946
	$2, \frac{}{1+\xi}$	$[1]\, 2a_n - 1$	$2a_n$	$n + 1 - 2^{\lfloor \lg n \rfloor}$	A062050
	$2, \frac{}{1+\xi}$	$2a_n - 1$	$2a_n + 1$	$2n + 1 - 2 \cdot 2^{\lfloor \lg n \rfloor}$	A006257
		$(2a_n)$	$(2a_n + 1)$	does not start 100	A004762
		$(2a_n)$	$(2a_n + 1)$	does not start 101	A004763
	$2,$	$2a_n + 1 + 3[n > 1]$	$2a_n + 1 + 5[n > 0]$	$A079251(n+1) - 2$	
		$(2a_n + +[n > 1])$	$(2a_n + +[n > 0])$	$A034702$	

$A(x) = \frac{1}{1-x}\left(B(x) + \sum_{k=0}^{\infty} C^k F(x^{2^k})\right)$

$B(x)$	$C, F(\xi)$	a_{2n}	a_{2n+1}			
	$1, \frac{\xi}{1+\xi^2}$	$a_n + [n \text{ odd}]$	$a_{n+1} + [n \text{ even}]$	$e_1(\text{Gray}(n))$, $A037834+1$	**15**,15*	A005811
	$2, \frac{\xi}{1+\xi^2}$	$2a_n + [n \text{ odd}]$	$2a_{n+1} + [n \text{ even}]$	n XOR $\lfloor \frac{n}{2} \rfloor$, *Gray code*	**15**	A003188
	$2, \frac{\xi^4-\xi^3+\xi^2}{1+\xi^2}$	$[0,0]\, 2a_n + [n \text{ odd}]$	$2a_{n+1} + [n \text{ even}]$	"derivative" of n		A038554
	$1, \frac{}{(1+\xi)^2}$	$a_n + 2n$	$a_n - 2n - 1$			A071413
	$1, \frac{\xi}{(1+\xi)(1+\xi^2)}$	a_n	$a_n + [n \text{ even}]$	Runs of 1s in binary		A069010
	$1, \frac{\xi^2}{(1+\xi)(1+\xi^2)}$	$a_n + [n \text{ odd}]$	a_n	counting 10 in binary		A033264
	$1, \frac{\xi^3}{(1+\xi)(1+\xi^2)}$	a_n	$a_n + [n \text{ odd}]$	counting 11 in binary		A014081
	$1, \frac{\xi^2(1+\xi+\xi^2)}{(1+\xi)(1+\xi^2)}$	$a_n + 1$	$a_n + [n \text{ odd}]$	# incr. bin. repr.		A033265
	$1, \frac{\xi^4}{(1+\xi)(1+\xi^2)}$	$a_n + [n \text{ even}]$	a_n	counting 00 in binary		A056973
	$1, \frac{\xi(1+\xi^2+\xi^3)}{(1+\xi)(1+\xi^2)}$	$a_n + [n \text{ even}]$	$a_n + 1$	# incr. bin. repr., $A037809+1$		
	$1, \frac{\xi^5}{(1+\xi)(1+\xi^2)}$	$[0,0]\, a_n$	$a_n + [n \text{ even}]$	counting 01 in binary		A037800
		a_n	$a_n + [n \equiv 3 \bmod 4]$	counting 111 in binary		A014082
		a_n	$a_n + [n \equiv 7 \bmod 8]$	counting 1111 in binary		A014083
	$2, \frac{3\xi-\xi^3}{(1+\xi)(1+\xi^2)}$	$2a_n$	$2a_n + 2(-1)^n + 1$	Reversing bin. rep. of $-n$		A048724
$1+$	$2, \frac{\xi(\xi^2+4\xi+1)}{(1+\xi)(1+\xi^2)}$	$2a_n$	$2a_{n+1} - 2(-1)^n + 1$	Reversing bin. rep. of $-n$		A065621

$A(x) = \frac{1}{1-x}\left(B(x) + \sum_{k=0}^{\infty} C^k F(x^{2^k})\right)$

$B(x)$	$C, F(\xi)$	a_{2n}	a_{2n+1}			
	$1, \frac{\xi}{1-\xi}$	$a_n + 2n$	$a_n + 2n + 1$	2^{a_n} divides $(2n)!$, $2n - e_1(2n)$		A005187
	$1,$	$a_n + 3n$	$a_n + 3n + 2$	den. in $(1-x)^{-1/4}, 3n - e_1(n)$		A004134
	$1,$	$a_n + n + 1$	$a_n + n + 1 + [n > 0]$	cube subgraphs, $n + \lfloor \lg n \rfloor$		A080804
	$1,$	$a_n + n - 1$	$a_n + n$	eigenvalues, $n - 1 - \lfloor \lg n \rfloor$		A083058
	$1,$	$a_n + 2n - 1$	$a_n + 2n + 1$	Connell seq., $2n - 1 - \lfloor \lg n \rfloor$		A049039
	$1,$	$a_n + 3n - 2$	$a_n + 3n + 1$	Connell seq., $3n - 2 - 2\lfloor \lg n \rfloor$		A050487
	$2, \frac{\xi}{1-\xi}$	$2a_n + 2n$	$2a_n + 2n + 1$			A080277
	$-1, \frac{\xi}{1-\xi}$	$-a_n + 2n$	$-a_n + 2n + 1$	double-free subsets of $\mathbf{N}$		A050292
	$-2, \frac{\xi}{1-\xi}$	$-2a_n + 2n$	$-2a_n + 2n + 1$	remove every 2nd bit, $A004514/2$		A063694
	$1, \frac{\xi}{1-\xi^2}$	$a_n + n$	$a_n + n + 1$	$\mathbf{N}$		A0
	$2, \frac{\xi}{1-\xi^2}$	$2a_n + n$	$2a_n + n + 1$	$A006520(n-1)$		—
	$-1, \frac{\xi}{1-\xi^2}$	$-a_n + n$	$-a_n + n + 1$	$\sum(-1)^{v_2}$		A068639
	$1, \frac{\xi^2}{1-\xi^2}$	$a_n + n$	$a_n + n$	2^{a_n} divides $n!$, $n - e_1(n)$	**9**	A011371
	$-2, \frac{2\xi^2}{1-\xi^2}$	$-2a_n + 2n$	$-2a_n + 2n$	remove even-pos. bits		A063695
	$-2,$	$-2a_n + 5n$	$-2a_n + 5n + 2$	binary counter		A057300
	$1, \frac{\xi^2(1+2\xi-\xi^2)}{(1-\xi^2)^2}$	$a_n + n^2$	$a_n + n^2 + 2n$	minimum cost addition chain	**21**	A005766

$$A(x) = \frac{1}{1-x}\left(B(x) + \sum_{k=0}^{\infty} C^k F(x^{2^k})\right)$$

$B(x)$	$C, F(\xi)$	a_{2n}	a_{2n+1}		
	$1, \frac{\xi}{1+\xi}$	a_n	$a_n + 1$	e_1	A000120
	$1, \frac{\xi^2}{1+\xi}$	$a_n + 1$	a_n	e_0	A023416
	$1, \frac{\xi+2\xi^2}{1+\xi}$	$a_n + 2$	$a_n + 1$	$A061313(n+1)$	
	$1, \frac{2\xi+\xi^2}{1+\xi}$	$a_n + 1$	$a_n + 2$	$A056792 + 1, A014701 + 2$	A056791
	$1, \frac{\xi^2-\xi}{1+\xi}$	$a_n + 1$	$a_n - 1$	$e_0 - e_1$	A037861
	$1, \frac{\xi^4}{1+\xi}$	$[0,0,0,0]\, a_n + 1$	a_n	$e_0(n) + A079944(n-2) + 1$	A083661
	$-1, \frac{\xi}{1+\xi}$	$-a_n$	$-a_n + 1$	alternating bit sum	A065359
	$-1, \frac{\xi^2}{1+\xi}$	$-a_n + 1$	$-a_n$		A083905
	$-2, \frac{\xi}{1+\xi}$	$-2a_n$	$-2a_n + 1$		A053985
	$3, \frac{\xi}{1+\xi}$	$3a_n$	$3a_n + 1$	$A003278 - 1, A033159 - 2, A033162 - 3$	A005836
	$3, \frac{2\xi}{1+\xi}$	$3a_n$	$3a_n + 2$		A005824
	$3,$	$[3]\, 3a_n$	$3a_n + 6$	$3 \nmid \sum_0^n \binom{2k}{k}$	A081601
	$3,$	$3a_n$	$3a_n + 6$	$A055246 - 1$	
$1+$	$3, \frac{\xi}{1+\xi}$	$[1]\, 3a_n - 2$	$3a_n - 1$	$a_n - 1$ in ternary$=$ n in bin.	A003278
	$3,$	$[2,3]\, 3a_n - 4$	$3a_n - 3$	$A003278 + 1$	(A033159)
	$3,$	$[3]\, 3a_n - 6$	$3a_n - 5$	$A003278 + 2$	A033162
	$3, \frac{\xi^2}{1+\xi}$	$3a_n + 1$	$3a_n$		A083904
	$4, \frac{\xi}{1+\xi}$	$4a_n$	$4a_n + 1$	Moser-de Bruijn	A000695
	$4, \frac{3\xi}{1+\xi}$	$4a_n$	$4a_n + 3$	double bitters	A001196

$$A(x) = \frac{1}{(1-x)^2} \left(B(x) + \sum_{k=0}^{\infty} C^k F(x^{2^k}) \right)$$

$B(x)$	$C, F(\xi)$	a_{2n}	a_{2n+1}			
	$1, \xi$	$a_n + a_{n-1} + 2n$	$2a_n + 2n + 1$	$n\lceil\lg n\rceil - 2^{\lceil\lg n\rceil} + 1$		A001855
		$2a_n + n$	$a_n + a_{n-1} + n$	$n + \min a_k, a_{n-k}$		A003314
	$2, \xi(1-\xi)$	$2a_n + 2a_{n-1} + 1$	$4a_n + 1$			A063915
	$1, \xi^2(1-\xi)$	$a_n + a_{n-1} + 1$	$[n > 0](2a_n + 1)$	$A_{6165}(n) - 1, A_{66997}$		
	$1,$	$a_n + a_{n-1} + 3 - 2[n < 2]$	$[n > 0](2a_n + 3)$	$A079945(n-2)$		
$1-$	$1, \xi^2(1-\xi)$	$[1]a_n + a_{n-1} - 1$	$2a_n - 1$	$A060973(n+1) + 1$		
$2-$	$1, \xi^2(1-\xi)$	$[2]a_n + a_{n-1} - 1$	$2a_n - 1$	$A007378(n+1) + 1$,A079905		
$-1+$	$1, 2\xi^2(1-\xi)$	$[-1]a_n + a_{n-1} + 2$	$2a_n + 2$	$A080776 - 2$		
$2+$	$1, 2\xi^2(1-\xi)$	$[2]a_n + a_{n-1} + 2$	$2a_n + 2$	$A005942(n+2) - 2$		
$\frac{3}{2x}+$	$2, 3/2\xi$	$(4a_n)$	$(2a_n + 2a_{n+1})$	$A073121 - 2$	21*	—
		$(2a_n + 2)$	$(a_n + a_{n-1} + 2)$	Aronson-like		A080639
	$1, \frac{\xi}{1-\xi}$	$a_n + a_{n-1} + 2n^2 + n$	$2a_n + 2n^2 + 3n + 1$	$A077071(n)/2$		
$\frac{x^2+x}{1-x}-$	$1, \frac{\xi}{1-\xi}$	$a_n + a_{n-1} + n - 1$	$2a_n + n$	$A_{788} - n$		A078903
	$-1, \frac{}{1-\xi}$	$-a_n - a_{n-1} + n^2 + n$	$-2a_n + n^2 + 2n + 1$	$\sum A068639$		
	$1, \frac{\xi}{1+\xi}$	$a_n + a_{n-1} + n$	$2a_n + n + 1$			A000788
	$2, \frac{\xi}{1+\xi}$	$2a_n + 2a_{n-1} + 3n - 2$	$4a_n + 3n$	$n(n-1)/2$		
	$-1, \frac{\xi}{1+\xi}$	$-(a_n + a_{n-1}) + n$	$-2a_n + n + 1$			A005536
	$1, \frac{\xi^2}{1+\xi}$	$a_n + a_{n-1} + n$	$2a_n + n$	$A059015 - 1$		
	$2, \frac{\xi}{1-\xi^2}$	$2(a_n + a_{n-1}) + n^2 + n$	$4a_n + n^2 + 2n + 1$	(A070263)		A022560
	$2, \frac{\xi}{1+\xi^2}$	$2(a_n + a_{n-1} + \lceil n/2\rceil)$	$4a_n + n + 1$			A048641