

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

$C, F(\xi)$	$a_{2n}$	$a_{2n+1}$		
$1, \frac{\xi^2}{1-\xi^2}$	$a_n + 1$	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
$1, \frac{\xi}{1+\xi}$	$a_n + 1$	-1	$v_2(n) - 1 + \lfloor n = 2^k \rfloor, \Delta_{e_0}$	—
$-1, \frac{\xi}{1-\xi}$	$-a_n + 1$	1	$\frac{1}{2}(1 + (-1)^{v_2}), v_2(2n) \bmod 2$	A035263
$2, \frac{\xi}{1-\xi}$	$2a_n + 1$	1	nin-sum, $2 \cdot 2^{v_2} - 1$	A038712
$3, \frac{\xi}{1-\xi}$	$3a_n + 3$	3	(Catalan mod 3), $(3^{v_2+2} - 1)/2 - 1$	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 $(2n)^n$	—
$2, \frac{\xi}{(1-\xi)^2}$	$2a_n + 4n$	$4n + 2$	$2^{a_n}$ divides $(2n)^{2n}$	A069895
$1, \frac{\xi}{(1-\xi)^2}$	$a_n$	$n$	$A003602(n-1)$	—
$1, \frac{\xi}{2\xi}$	$a_n$	$2n + 1$	$A000265 + 1$	—
$2, \frac{\xi^3 - \xi^2 + \xi + 1}{(1-\xi^2)^2}$	$2a_n + 1$	$n$	switch trailing 0s, $n + 2^{v_2} - 1$	A086799
$2, \frac{\xi^5 - \xi^4 + \xi + 1}{(1-\xi^4)^2}$	$2a_n$	$4n + 3$	$a(a(n)) = 2n$	A002516
$1, \frac{\xi(1+2\xi-2\xi^2)}{(1-2\xi)(1-\xi^2)}$	$a_n + 2^n$	$2^{2n+1} - 1$	$A045654 - 1$	—
$1, \frac{\xi}{1+\xi+\xi^2}$	$a_n + 1 - (n+1 \bmod 3)$	$1 - (n \bmod 3)$		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+	$1, \xi$	$a_n + 1$	$a_n + 1$	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+	$2, \xi$	$[1] 2a_n$	$2a_n$	$2 \cdot 2^{\lfloor \log n \rfloor}$	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, $2^{\lfloor \log n \rfloor}$	A053644
	$2, 3\xi^2$	$[2] 2a_n - 1$	$2a_n - 1$	$1 + 2^{\lfloor \log n + 1 \rfloor}$	A076877
$\frac{x-2x^2}{1-x} +$	$2, 3\xi^2$	$[0, 1] 2a_n + 1$	$2a_n$		A054429
	$2, \frac{\xi}{1+\xi^2}$	$2a_n$	$2a_n + 1$	N	A000027
	$2, \frac{\xi}{1+\xi}$	$2a_n + 1$	$2a_n$	$-(n+1) + 2 \cdot 2^{\lfloor \log n \rfloor}$	(A035327)
1+	$2, \frac{\xi+3\xi^2}{1+\xi}$	$[1] 2a_n + 1$	$2a_n$	$-(n+1) + 4 \cdot 2^{\lfloor \log n \rfloor}$	(A010078)
	$2, \frac{\xi+3\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + [n == 0]$	$n + 2^{\lfloor \log n \rfloor}$ , (A004761)	A004754
1+	$2, \frac{2\xi+\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 2^{\lfloor n == 0 \rfloor}$	$n + 2 \cdot 2^{\lfloor \log n \rfloor}$ , (A004760)	A004755
	$2, \frac{2\xi+\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 3^{\lfloor n == 0 \rfloor}$		A004756
2+	$2, \frac{3\xi+2\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 4^{\lfloor n == 0 \rfloor}$	does start 101	A004757
	$2, \frac{3\xi+2\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 5^{\lfloor n == 0 \rfloor}$	does start 110	A004758
3+	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$2a_n$	$2a_n + 1 + 6^{\lfloor n == 0 \rfloor}$	does start 111	A004759
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$2a_n$	$2a_n + 2 + 4^{\lfloor n == 0 \rfloor}$	Aronson-like, $2n + 4 \cdot 2^{\lfloor \log n \rfloor}$	A0079946
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$[1] 2a_n - 1$	$2a_n$	$n + 1 - 2^{\lfloor \log n \rfloor}$	A062050
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$2a_n - 1$	$2a_n + 1$	$2n + 1 - 2 \cdot 2^{\lfloor \log n \rfloor}$	A006257
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$(2a_n)$	$(2a_n + 1)$	does not start 100	A004762
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$(2a_n)$	$(2a_n + 1)$	does not start 101	A004763
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$2a_n + 1 + 3^{\lfloor n > 1 \rfloor}$	$2a_n + 1 + 5^{\lfloor n > 0 \rfloor}$	A079251 ( $n + 1$ ) - 2	
	$2, \frac{4\xi+3\xi^2}{1+\xi}$	$(2a_n + [n > 1])$	$(2a_n + [n > 0])$	A034702	

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

$B(x)$	$C, F(\xi)$	$a_{2n}$	$a_{2n+1}$				
	$1, \frac{\xi}{1+\xi^2}$	$a_n + [n \text{ odd}]$	$a_{n+1} + [n \text{ even}]$	$e_1(\text{Gray}(n)), A037834 + 1$	<b>15,15*</b>	A005811	
	$2, \frac{\xi}{1+\xi^2}$	$2a_n + [n \text{ odd}]$	$2a_{n+1} + [n \text{ even}]$	$n \text{ XOR } \lfloor \frac{n}{2} \rfloor, \text{ Gray code}$	<b>15</b>	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	
	$1, \frac{\xi}{(1+\xi)^2}$	$a_n + 2n$	$a_n - 2n - 1$			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	
	$1, \frac{\xi(1+\xi+\xi^3)}{(1+\xi)(1+\xi^2)}$	$a_n + [n \text{ even}]$	$a_n + 1$	# incr. bin. repr., A037809 + 1			
	$1, \frac{\xi(1+\xi^2+\xi^3)}{(1+\xi)(1+\xi^2)}$	$a_n + [n \text{ even}]$	$a_n + [n \text{ even}]$	counting 01 in binary		A037800	
	$1, \frac{\xi^5}{(1+\xi)(1+\xi^2)}$	$[0, 0] a_n$	$a_n + [n \equiv 3 \text{ mod } 4]$	counting 111 in binary		A014082	
		$a_n$	$a_n + [n \equiv 7 \text{ mod } 8]$	counting 1111 in binary		A014083	
		$a_n$	$2a_n + 2(-1)^n + 1$	Reversing bin. rep. of $-n$		A048724	
	$2, \frac{3\xi^2 - \xi^3}{(1+\xi)(1+\xi^2)}$	$2a_n$	$2a_{n+1} - 2(-1)^n + 1$	Reversing bin. rep. of $-n$		A065621	
	$2, \frac{\xi(\xi^2 + 4\xi + 1)}{(1+\xi)(1+\xi^2)}$	$2a_n$					

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

$B(x)$	$C, F(\xi)$	$a_{2n}$	$a_{2n+1}$		
$1, \frac{\xi}{1-\xi}$	$a_n + 2n$	$a_n + 2n + 1$	$2^{a_n}$ 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 $n!, n - e_1(n)$	<b>9</b> 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	<b>21</b> 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
	$1, \frac{\xi^2}{1+\xi^2}$	$a_n + 1$	$a_n$	$e_0$	A023416
	$1, \frac{\xi+2\xi^2}{1+\xi}$	$a_n + 2$	$a_n + 1$	$A061313(n+1)$	
	$1, \frac{2\xi+4\xi^2}{1+\xi}$	$a_n + 1$	$a_n + 2$	$A056792 + 1, A014701 + 2$	A056791
	$1, \frac{\xi^2-\xi}{1+\xi}$	$a_n + 1$	$a_n - 1$	$e_0 - e_1$	A037861
	$1, \frac{\xi}{1+\xi}$	$[0, 0, 0] a_n + 1$	$a_n$	$e_0(n) + A079944(n-2) + 1$	A083661
	$-1, \frac{\xi}{1+\xi}$	$-a_n$	$-a_n + 1$	alternating bit sum	A065359
	$-1, \frac{\xi^2}{1+\xi^2}$	$-a_n + 1$	$-a_n$		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
	$3, \frac{\xi}{1+\xi}$	$[3] 3a_n$	$3a_n + 6$	$3 \sum_0^n \binom{2k}{k}$	A081601
	$3, \frac{\xi^2}{1+\xi^2}$	$3a_n$	$3a_n + 6$	$A055246 - 1$	
	$1+$	$[1] 3a_n - 2$	$3a_n - 1$	$a_n - 1$ in ternary = $n$ in bin.	A003278
	$3, \frac{\xi}{1+\xi}$	$[2, 3] 3a_n - 4$	$3a_n - 3$	$A003278 + 1$	(A033159)
	$3, \frac{\xi^2}{1+\xi^2}$	$[3] 3a_n - 6$	$3a_n - 5$	$A003278 + 2$	A033162
	$3, \frac{\xi^2}{1+\xi^2}$	$3a_n + 1$	$3a_n$		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

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

$B(x)$	$C, F(\xi)$	$a_{2n}$	$a_{2n+1}$			
$1, \xi$	$a_n + a_{n-1} + 2n$	$2a_n + 2n + 1$	$n \lfloor \log n \rfloor - 2 \lceil \log n \rceil + 1$	A001855		
$2, \xi(1-\xi)$	$2a_n + n$	$a_n + a_{n-1} + n$	$n + \min a_k, a_{n-k}$	A003314		
$1, \xi^2(1-\xi)$	$2a_n + 2a_{n-1} + 1$	$4a_n + 1$	A063915			
$1, \xi^2(1-\xi)$	$a_n + a_{n-1} + 1$	$[n > 0](2a_n + 1)$	$A_{6165}(n) - 1, A_{6997}$			
$1, \xi^2(1-\xi)$	$a_n + a_{n-1} + 3 - 2[n < 2]$	$[n > 0](2a_n + 3)$	$A_{079945}(n - 2)$			
$1, \xi^2(1-\xi)$	$[1]a_n + a_{n-1} - 1$	$2a_n - 1$	$A_{060973}(n + 1) + 1$			
$2-$	$[2]a_n + a_{n-1} - 1$	$2a_n - 1$	$A_{007378}(n + 1) + 1, A_{079905}$			
$-1+$	$[2]a_n + a_{n-1} - 1$	$2a_n + 2$	$A_{080776} - 2$			
$2+$	$[-1]a_n + a_{n-1} + 2$	$2a_n + 2$	$A_{005942}(n + 2) - 2$			
$\frac{3}{2}+$	$[2]a_n + a_{n-1} + 2$	$2a_n + 2$	$A_{073121} - 2$		21*	—
	$(4a_n)$	$(2a_n + 2a_{n+1})$	Aronson-like			A080639
	$(2a_n + 2)$	$(a_n + a_{n-1} + 2)$				
$1, \frac{1-\xi}{1-\xi}$	$a_n + a_{n-1} + 2n^2 + n$	$2a_n + 2n^2 + 3n + 1$	$A_{077071}(n)/2$			
$1, \frac{\xi}{1-\xi}$	$a_n + a_{n-1} + n - 1$	$2a_n + n$	$A_{788} - n$			A078903
$-1, \frac{1-\xi}{1-\xi}$	$-a_n - a_{n-1} + n^2 + n$	$-2a_n + n^2 + 2n + 1$	$\sum A_{068639}$			A000788
$1, \frac{1+\xi}{1+\xi}$	$a_n + a_{n-1} + n$	$2a_n + n + 1$				
$2, \frac{1+\xi}{1+\xi}$	$2a_n + 2a_{n-1} + 3n - 2$	$4a_n + 3n$	$n(n-1)/2$			A005536
$-1, \frac{1+\xi}{1+\xi}$	$-(a_n + a_{n-1}) + n$	$-2a_n + n + 1$				
$1, \frac{\xi^2}{1+\xi}$	$a_n + a_{n-1} + n$	$2a_n + n$	$A_{059015} - 1$			
$2, \frac{1-\xi^2}{1-\xi^2}$	$2(a_n + a_{n-1}) + n^2 + n$	$4a_n + n^2 + 2n + 1$	$(A_{070263})$			A022560
$2, \frac{\xi}{1+\xi^2}$	$2(a_n + a_{n-1} + [n/2])$	$4a_n + n + 1$				A048641