

## Primes of the form $2^n - 1$ and $2^n + 1$

$n$	$2^n - 1$	PRIME?	$n$	$2^n + 1$	PRIME?
1	1		1	3	YES
2	3	YES	2	5	YES
3	7	YES	3	9	
4	15		4	17	YES
5	31	YES	5	33	
6	63		6	65	
7	127	YES	7	129	
8	255		8	257	YES
9	511		9	513	
10	1023		10	1025	
11	2047		11	2049	
12	4095		12	4097	
13	8191	YES	13	8193	
14	16383		14	16385	
15	32767		15	32769	
16	65535		16	65537	YES
17	131071	YES	17	131073	
18	262143		18	262145	
19	524287	YES	19	524289	
20	1048575		20	1048577	
21	2097151		21	2097153	
22	4194303		22	4194305	
23	8388607		23	8388609	
24	16777215		24	16777217	
25	33554431		25	33554433	
26	67108863		26	67108865	
27	134217727		27	134217729	
28	268435455		28	268435457	
29	536870911		29	536870913	

For which  $n$ 's is  $2^n - 1$  prime? For which  $n$ 's is  $2^n + 1$  prime?