

Scan

A84740-
- A84742
etc

Letter from R G Wilson, Jr

circa 1991

3 pages
add to many

A84740

1st prime of the form $(b^p - 1) / (b - 1)$ for ^{successive} ~~see~~ bases

2, 3, 2, 3, 2, 5, 3, \emptyset , 2, 17, 2, 3, 3, 3, 2, 3, 2, 19, 3,

3, 2, 5, 3, \emptyset , 7, 3, 2, 5, 2, 7, \emptyset , 3, 13, [2, 1]

MOC v 16 n 204 p 928 Oct 93

["Sylvester" primes $(b^n - 1) / (b - 1)$ JRM v 8 n 3 p 215 ¹⁹⁷⁵]

From R. G. Wilson, v,
circa 1991

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A7658
A1562
A57171

b n for which $(b^n + 1) / (b + 1)$ is prime Ref: CU NN
for $b \leq 12$

^m
2351 2 3, 5, 7, 11, 13, 17, 19, 23, 31, 43, 61, 79, 101, 127, 167, 199, 313, 347, 701, 1709, 2617 ¹⁹¹ ↑

A7658 3 3, 5, 7, 13, 23, 43, 281, 359, 487, 577

$\frac{3^4 + 1}{4}$ is prime

4 3,

5 5, 67, 101, 103, 229, 347,

A57171

6, 3, 11, 31, 43, 47, 59, 107,

7 3, 17, 23, 29, 47, 61,

8 none

9 3, 59, 223,

^m
3664 10 5, 7, 19, 31, 53, 67, 293, 641

A1562

11 5, 7, 179, 229,

12 5, 11, 109, 193,

13 3, 11, 17, 19,

14 7, 53,

15 3, 7, 29,

16 3, 5, 7, 23, 37, 89, 149, 173

17 7, 17, 23, 47,

18 3, 7, 23, 73,

19 17, 37, 157,

20 5, 79, 89,

21 3, 5, 7, 13, 37,

22 3, 5, 13, 43, 79

23 11, 13, 67, 109

24 7, 11, 19

25 3, 7, 23, 29, 59,

A84742 }
A84741 }

p, 1st Prime of the form $(b^p + 1) / (b + 1)$ for successive bases

3, 3, 3, 5, 3, 3, \emptyset , 3, 5, 5, 5, 3, 7, 3, 3, 7, 3, 17, 5, 3,

3, 11, 7, 3, 11, \emptyset , 3, 7, 139, 109, \emptyset , 5, 3, 11, 31, 5, 5, 3,

53, 17, 3, 5, 7, 103, 7, 5, 5, 7,

[2, 1]

a[b_] := (For[n=1, Not[PrimeQ[(b^Prime[n]+1)/(b+1)] != False], n++]; Print[Prime[n]])

[R.G. Wilson, Jr.]

c.u. 1991