

~~to be entered as found~~
 Ent'd to be checked

August 8, 1970

Dear Neil,

I have just arrived in Berkeley for about a month's stay and learned from John Selfridge that you have inquired about $10^p - 1$ and $10^p + 1$. Concerning the former, I published some work I did a few years ago in Math. Comp., 1967, pp. 87-96 with John Selfridge in a paper "Some Factorizations of $2^n \pm 1$ and Related Results". In that paper I reported that the only values of $p < 359$ for which $(10^p - 1)/9$ is prime are $p = 2, 19,$ and 23 , which have been known to be prime for many years. I think Elwyn may have a copy of the paper.

I have gotten from John some results on the other numbers $(10^p + 1)/11$ which state the only values of $p < 135$ which yield primes are $p = 5, 7, 19, 31, 53,$ and 67 . Of course, without the 11 divisor the number with $p = 2$ gives a prime.

John, the Lehmers, and I are quite busy trying to finish up a large project concerning $a^n \pm 1$ for $a < 13$. In time it will appear as a book and should be rather useful, since its predecessor is already 50 years old and is a bit out of date.

I trust the friendly group of people at Bell are all as busily occupied as usual. I always have enjoyed the productivity of that place, and hope to return some time, when I get some of the present backlog pushed into print.

Please give my regards to Ron and Elwyn.

With best regards.

Sincerely,

John
 John Brillhart

✓ 10/8/70

W sequence
 1562