Two unusual defined and possible infinite sequences of primes and two conjectures

Abstract. In this paper I state two conjectures: (I) There exist an infinity of primes p of the form n – 1, where n is the number obtained concatenating the digits of a prime q, each one of them multiplied by 6 (example: for q = 239, n = 121854 and p = n – 1 = 121853, prime); (II) There exist an infinity of primes p of the form n + 1, where n is the number obtained concatenating the digits of a prime q, each one of them multiplied by 6 (example: for q = 283, n = 124818 and p = n + 1 = 124819, prime).

Conjecture 1:

There exist an infinity of primes p of the form n – 1, where n is the number obtained concatenating the digits of a prime q, each one of them multiplied by 6.

Example: for q = 239, n = 121854 and p = 121853, prime.

The sequence of primes p:

: for p = 5, n = 30 and p = n – 1 = 29, prime;
: for p = 7, n = 42 and p = n - 1 = 41, prime;
: for p = 13, n = 618 and p = n - 1 = 617, prime;
: for p = 17, n = 642 and p = n – 1 = 641, prime;
: for p = 23, n = 1218 and p = n – 1 = 1217, prime;
: for p = 43, n = 2418 and p = n – 1 = 2417, prime;
: for p = 47, n = 2442 and p = n – 1 = 2441, prime;
: for p = 73, n = 4218 and p = n - 1 = 4217, prime;
: for p = 79, n = 4254 and p = n - 1 = 4253, prime;
: for p = 83, n = 4818 and p = n - 1 = 4817, prime;
: for p = 97, n = 5442 and p = n - 1 = 5441, prime;
: for p = 109, n = 6054 and p = n - 1 = 6053, prime;
: for p = 163, n = 63618 and p = n - 1 = 63617, prime;
: for p = 173, n = 64218 and p = n - 1 = 64217, prime;
: for p = 239, n = 121854 and p = n - 1 = 121853, prime;
: for p = 269, n = 123654 and p = n - 1 = 123653, prime;
: for p = 307, n = 18042 and p = n - 1 = 18041, prime;
: for p = 313, n = 18618 and p = n - 1 = 18617, prime;
: for p = 349, n = 182454 and p = n - 1 = 182453, prime;
: for p = 397, n = 185442 and p = n - 1 = 185441, prime;

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: for p = 104717, n = 602442642 and p = n - 1 = 602442641, prime;

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Conjecture 2:

There exist an infinity of primes p of the form n + 1, where n is the number obtained concatenating the digits of a prime q, each one of them multiplied by 6.

Example: for q = 283, n = 124818 and p = 124819, prime.

The sequence of primes p:

: for p = 5, n = 30 and p = n + 1 = 31, prime;
: for p = 7, n = 42 and p = n + 1 = 43, prime;
: for p = 11, n = 66 and p = n + 1 = 67, prime;
: for p = 13, n = 618 and p = n + 1 = 619, prime;
: for p = 17, n = 642 and p = n + 1 = 643, prime;
: for p = 53, n = 3018 and p = n + 1 = 3019, prime;
: for p = 61, n = 366 and p = n + 1 = 367, prime;
: for p = 67, n = 3642 and p = n + 1 = 3643, prime;
: for p = 73, n = 4218 and p = n + 1 = 4219, prime;
: for p = 97, n = 5442 and p = n + 1 = 5443, prime;
: for p = 101, n = 606 and p = n + 1 = 607, prime;
: for p = 107, n = 6042 and p = n + 1 = 6043, prime;
: for p = 113, n = 6618 and p = n + 1 = 6619, prime;
: for p = 137, n = 61842 and p = n + 1 = 61843, prime;
: for p = 191, n = 6546 and p = n + 1 = 6547, prime;
: for p = 193, n = 65418 and p = n + 1 = 65419, prime;
: for p = 263, n = 123618 and p = n + 1 = 123619, prime;
: for p = 281, n = 12486 and p = n + 1 = 12487, prime;
: for p = 283, n = 124818 and p = n + 1 = 124819, prime;
: for p = 307, n = 18042 and p = n + 1 = 18043, prime;
: for p = 311, n = 1866 and p = n + 1 = 1867, prime;
: for p = 347, n = 182442 and p = n + 1 = 182443, prime;

(...)

: for p = 104677, n = 6024364242 and p = n + 1 = 6024364243, prime;

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