

Primes obtained concatenating with 1 to the left the terms of three Smarandache sequences

Abstract. In this paper I state the following three conjectures: (I) There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache reverse sequence*; (II) There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache back concatenated odd sequence*; (III) There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache back concatenated square sequence*.

Conjecture I:

There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache reverse sequence* (defined as the sequence obtained through the concatenation of the first n positive integers, in reverse order).

The Smarandache reverse sequence:

(A000422 in OEIS):

: 1, 21, 321, 4321, 54321, 654321, 7654321, 87654321, 987654321, 10987654321 (...)

The sequence of primes p :

: 11, 1321, 14321, 154321, 113121110987654321, 11413121110987654321 (...)

Conjecture II:

There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache back concatenated odd sequence* (defined as the sequence obtained through the concatenation of the first n odd numbers, in reverse order).

The Smarandache back concatenated odd sequence:

(A038395 in OEIS):

: 1, 31, 531, 7531, 97531, 1197531, 131197531, 15131197531, 1715131197531, 1917151311975311 (...)

The sequence of primes p :

: 131, 1531, 151494745434139373533312927252321191715131197531 (...)

Conjecture III:

There exist an infinity of primes p obtained concatenating to the left with 1 the terms of the *Smarandache back concatenated square sequence* (defined as the sequence obtained through the concatenation of the first n squares, in reverse order).

The Smarandache back concatenated square sequence:

(A038397 in OEIS):

: 1, 41, 941, 16941, 2516941, 362516941, 49362516941,
6449362516941, 816449362516941, 100816449362516941
(...)

The sequence of primes p :

: 11, 12516941, 16449362516941, 1100816449362516941
(...)