

Primes obtained concatenating the numbers $30-d(n)$ where $d(1), \dots, d(n)$ are the digits of a Poulet number

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Abstract. In this paper I make the following observation: for many Poulet numbers (I conjecture that for an infinity of them) the numbers obtained concatenating $30 - d(1), 30 - d(2), \dots, 30 - d(n)$, where $d(1), \dots, d(n)$ are the digits of a n -digits Poulet number, are primes. Example: for 8911 the number obtained concatenating $22 = 30 - 8$ with $21 = 30 - 9$ with $29 = 30 - 1$ with $29 = 30 - 1$, i.e. the number 22212929, is prime.

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The sequence of primes obtained:

: 27282323, from the Poulet number 3277;
: 23212523, from the Poulet number 7957;
: 22272829, from the Poulet number 8321;
: 22212929, from the Poulet number 8911;
: 2729242829, from the Poulet number 31621;
: 2629302629, from the Poulet number 41041;
: 2628232121, from the Poulet number 42799;
: 293026242527, from the Poulet number 104653;
: 292621282229, from the Poulet number 149281;
: 292530222529, from the Poulet number 150851;
: 282925232621, from the Poulet number 215749;
: 282629303029, from the Poulet number 241001;
: 282126263021, from the Poulet number 294409;
: 272124282329, from the Poulet number 396271;
: 242330302727, from the Poulet number 670033;
(...)