Generic form for a probably infinite sequence of Poulet numbers ie 2n^2+147n+2701

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Abstract. In this paper I observe that the formula 2*n^2 + 147*n + 2701 produces Poulet numbers, and I conjecture that this formula is generic for an infinite sequence of Poulet numbers.

The sequence of Poulet numbers of the form 2*n^2 + 147*n + 2701:

: 2701, 4371, 8911, 10585, 18721, 33153, 49141, 93961 (...)

These numbers were obtained for the following values of n:

: 0, 10, 30, 36, 60, 92, 120, 180 (...)

Conjecture:

There are infinite many Poulet numbers P of the form 2*n^2 + 147*n + 2701 (see A214016 posted by me on OEIS for a subsequence of the sequence from above, i.e. Poulet numbers of the form 7200*n^2 + 8820*n + 2701).

Observation:

Note the following interesting facts:

: for P = 2701 = 37*73 both 37 (= 2*17 + 3) and 73 (=4*17 + 5) can be written as 17*m + m + 1, where m positive integer;
: for p = 10585 = 5*29*73 both 5*29 = 145 (=8*17 + 9) and 73 (=4*17 + 5) can be written as 17*m + m + 1;
: for p = 93961 = 7*31*433 both 7*31 = 217 (=12*17 + 13) and 433 (=24*17 + 25) can be written as 17*m + m + 1.

: for P = 4371 = 3*31*47 both 31 (= 2*17 - 3) and 47 (=3*17 - 4) can be written as 17*m – m - 1, where m positive integer;
: for P = 18721 = 97*193 both 97 (= 6*17 - 5) and 193 (=12*17 - 11) can be written as 17*m – m – 1;
: for p = 33153 = 3*43*257 both 3*43 = 129 (=8*17 - 7) and 257 (=16*17 - 15) can be written as 17*m - m – 1.

Observation:

Note the following subsequence of the sequence from above, obtained for n = 10*m:

: 2701, 4371, 8911, 18721, 49141 93961, 226801, 314821, 534061, 665281, 915981 (...)

obtained for m = 0, 1, 3, 6, 12, 18, 30, 36, 48, 54, 64 (...)