Two conjectures on Poulet numbers of the form mn^2+11mn-23n+19m-49

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Abstract. In this paper I observe that the formula m*n^2 + 11*m*n – 23*n + 19*m - 49 produces Poulet numbers, and I conjecture that this formula produces an infinite sequence of Poulet numbers for any m non-null positive integer, respectively for any n non-null positive integer.

Conjecture 1:

The formula m*n^2 + 11*m*n – 23*n + 19*m - 49 produces an infinite sequence of Poulet numbers for any n non-null positive integer.

Examples:

Formula becomes 31*m – 72 for n = 1 and we have the following sequence of Poulet numbers P = 31*m – 72 (obtained for m = 259, 367, 5111):
:   7957, 11305, 158369 (...)

Formula becomes 45*m – 95 for n = 2 and we have the following sequence of Poulet numbers P = 45*m – 95 (obtained for m = 888, 928, 2384):
:   39865, 41665, 107185(...)

Formula becomes 61*m – 118 for n = 3 and we have the following sequence of Poulet numbers P = 61*m – 118 (obtained for m = 329, 379):
:   19951, 23001(...)

Formula becomes 99*m – 164 for n = 5 and we have the following sequence of Poulet numbers P = 99*m – 164 (obtained for m = 319, 659, 1387):
:   31417, 65077, 137149(...)

Conjecture 2:

The formula m*n^2 + 11*m*n – 23*n + 19*m - 49 produces an infinite sequence of Poulet numbers for any m non-null positive integer.

Examples:

Formula becomes 3*n^2 + 10*n + 8 for m = 3 and we have the following sequence of Poulet numbers P = 3*n^2 + 10*n + 8 (obtained for n = 9, 13, 27, 29, 35, 41, 51, 71, 91, 101, 149, 165):

: 341, 645, 2465, 2821, 4033, 5461, 8321, 15841, 25761, 31621, 68101, 83333 (...)

Formula becomes 4*n^2 + 21*n + 27 for m = 4 and we have the following sequence of Poulet numbers P = 4*n^2 + 21*n + 27 (obtained for n = 14, 16, 20, 26, 38, 56, 62, 68, 86, 134, 142, 146, 148):

: 1105, 1387, 2047, 3277, 6601, 13747, 16705, 19951, 31417, 83665, 88357, 90751 (...)