Two conjectures on Novák-Carmichael numbers

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Abstract. In this paper I make the following two conjectures on Novák-Carmichael numbers: (1) There exist an infinity of Novák-Carmichael numbers of the form (30n + p)*(30n + q) – p*q for any [p, q] distinct primes of the form 6k + 1; (2) There exist an infinity of Novák-Carmichael numbers of the form (30n + p)*(30n + q) - p*q for any [p, q] distinct primes of the form 6k – 1, where k > 1. See the sequence A124240 in OEIS for Novák-Carmichael numbers (numbers n such that a^n ≡ 1 (mod n) for every a coprime to n).

Conjecture 1:

There exist an infinity of Novák-Carmichael numbers C of the form (30n + p)*(30n + q) – p*q for any [p, q] distinct primes of the form 6k + 1.

The sequence of C for [p, q] = [7, 13]:
(up to n = 20)

1500, 4800, 9900, 16800, 36000, 62400, 96000, 115500, 136800, 184800, 240000, 302400, 372000 [...]

corresponding to n = 1, 2, 3, 4, 6, 8, 10, 11, 12, 14, 16, 18, 20 [...].

The sequence of C for [p, q] = [13, 19]:
(up to n = 20)

1860, 10980, 27300, 50820, 65280, 141120, 189840, 245760, 308880 [...]

corresponding to n = 1, 3, 5, 7, 8, 12, 14, 16, 18 [...].

The sequence of C for [p, q] = [7, 19]:
(up to n = 20)

1680, 26400, 79920, 117480, 162240, 242800 [...]

corresponding to n = 1, 5, 9, 11, 13, 16 [...].

Conjecture 2:

There exist an infinity of Novák-Carmichael numbers C of the form (30n + p)*(30n + q) - p*q for any [p, q] distinct primes of the form 6k – 1, where k > 1.

The sequence of C for [p, q] = [11, 17]:
(up to n = 100)

5280, 37440, 98400, 139680, 188160, 538560, 729120, 1131900, 1860300, 1943040, 2869440, 5541120, 6420960, 7365600, 7529340 [...]

corresponding to n = 2, 5, 10, 12, 14, 24, 28, 35, 45, 46, 56, 78, 84, 90, 91 [...]

The sequence of C for [p, q] = [17, 23]:
(up to n = 20)

2100, 6000, 11700, 19200, 39600, 52500, 67200, 83700, 102000, 144000, 220500, 249600, 384000 [...]

corresponding to n = 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 15, 16, 20 [...]

The sequence of C for [p, q] = [11, 23]:
(up to n = 20)

1920, 11160, 18480, 51240, 82080, 120120, 165360, 217800, 277440, 309960 [...]

corresponding to n = 1, 3, 4, 7, 9, 11, 13, 15, 17, 18 [...]