Conjecture on the numbers 3p(q-1)-1 where p and q are primes and p=q+6

Abstract. In this paper I state the following conjecture: there exist an infinity of primes of the form 3*p*(q – 1) – 1, where p and q are primes and p = q + 6. Note that from the first terms of the sequence of sexy primes we have a chain of consecutive 9 primes: 131, 233, 509, 683, 1103, 1913, 3329, 4643, 5639 (for q = 5, 7, 11, 13, 17, 23, 31, 37, 41).

Conjecture:

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The sequence of primes of this form:

: 3*11*(5 – 1) = 131, prime;
: 3*13*(7 – 1) = 233, prime;
: 3*17*(11 – 1) = 509, prime;
: 3*19*(13 – 1) = 683, prime;
: 3*23*(17 – 1) = 1103, prime;
: 3*29*(23 – 1) = 1913, prime;
: 3*37*(31 – 1) = 3329, prime;
: 3*43*(37 – 1) = 4643, prime;
: 3*47*(41 – 1) = 5639, prime;
: 3*59*(53 – 1) = 9203, prime;
: 3*89*(83 – 1) = 21893, prime;
: 3*103*(97 – 1) = 29663, prime;
: 3*107*(101 – 1) = 32099, prime;
: 3*109*(103 – 1) = 33353, prime;
: 3*113*(107 – 1) = 35933, prime;
: 3*163*(157 – 1) = 76283, prime;
: 3*179*(173 – 1) = 92363, prime;
: 3*197*(191 – 1) = 112289, prime;
: 3*257*(251 – 1) = 192749, prime;
: 3*269*(263 – 1) = 211433, prime;
: 3*283*(277 – 1) = 224369, prime;
: 3*313*(307 – 1) = 287333, prime;
: 3*317*(311 – 1) = 294809, prime;
: 3*359*(353 – 1) = 379103, prime;
: 3*449*(443 – 1) = 595373, prime;
: 3*463*(457 – 1) = 595373, prime;
: 3*509*(503 – 1) = 766553, prime;
(...)

Note:

The sequence of the semiprimes m*n of this form is also interesting because of a property shared by many of these, i.e. that m + n – 1 is prime; examples:

: 3*53*(47 – 1) = 7313 = 71*103 and 71 + 103 – 1 = 173, prime;
: 3*67*(61 – 1) = 12059 = 31*389 and 31 + 389 – 1 = 419, prime;
: 3*79*(73 – 1) = 17063 = 113*151 and 113 + 151 – 1 = 263, prime;
: 3*173*(167 – 1) = 86153 = 101*853 and 101 + 853 – 1 = 953, prime;
: 3*277*(271 – 1) = 224369 = 89*2521 and 89 + 2521 – 1 = 2609, prime.