Conjecture on the infinity of a set of primes obtained from Sophie Germain primes

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Abstract. In this paper I conjecture that there exist an infinity of primes of the form 2*p^2 – p – 2, where p is a Sophie Germain prime, I show first few terms from this set and few larger ones.

Conjecture:

There exist an infinity of primes of the form q = 2*p^2 – p – 2, where p is a Sophie Germain prime (that obviously implies that there are infinitely many Sophie Germain primes).

The first few terms of this set:

q = 13, 43, 229, 1033, 3319, 5563, 13693, 25423, 63901, 108343, 114001, 157639, 171403, 257401, 392053, 1103353, 2051323, 2432113, 3969151, 4140001, 4209349 (...), obtained for p = 3, 5, 11, 23, 41, 53, 83, 113, 179, 233, 239, 281, 293, 359, 443, 743, 1013, 1103, 1409, 1439, 1451 (...)

Five consecutive larger terms:

q = 751577599183783 for p = 19385273;
q = 751743236079151 for p = 19387409;
q = 751746493167349 for p = 19387451;
q = 751876782481189 for p = 19389131;
q = 751901445657751 for p = 19389449.

Note:

Beside the first two Sophie Germain primes, the numbers 2 and 3, all the others are odd primes of the form 9*k + 2, 9*k + 5 or 9*k + 8 (and all the numbers q from the set presented above are of the form 9*k + 1, 9*k + 4 or 9*k + 7). I conjecture that there exist an infinity of primes of the form q = 2*p^2 – p – 2, where p is a Sophie Germain prime, such that, reiterating the operation of addition of the digits of q, is eventually reached the number 13 (e.g. the sum of the digits of q = 751577599183783 is 85 and 8 + 5 = 13, the sum of the digits of q = 751746493167349 is 76 and 7 + 6 = 13 and the sum of the digits of q = 751901445657751 is 67 and 6 + 7 = 13).