A bold conjecture about a way in which any square of prime can be written

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Abstract. In this paper I make a conjecture which states that any square of a prime greater than or equal to 7 can be written at least in one way as a sum of three odd primes, not necessarily distinct, but all three of the form 10k + 3 or all three of the form 10k + 7.

Conjecture:

Any square of a prime greater than or equal to 7 can be written at least in one way as a sum of three odd primes, not necessarily distinct, but all three of the form 10k + 3 or all three of the form 10k + 7.

Verifying the conjecture:
(For the first few primes greater than or equal to 7)

(Note that we will not show all ways in which a square of a prime can be written in the way mentioned but only one way, enough to confirm the conjecture)

: 7^2 = 49 = 13 + 13 + 23;
: 11^2 = 121 = 37 + 37 + 47;
: 13^2 = 169 = 13 + 43 + 113;
: 17^2 = 289 = 13 + 13 + 263;
: 19^2 = 361 = 7 + 17 + 337;
: 23^ = 529 = 13 + 53 + 563.

Conjecture:

Any square of a prime p^2, where p is greater than or equal to 7, can be written as p^2 = 2*m + n, where m and n are distinct primes, both of the form 10k + 3 or both of the form 10k + 7.

Verifying the conjecture:
(For the first few primes greater than or equal to 7)

(Note that we will not show all ways in which a square of a prime can be written in the way mentioned but only one way, enough to confirm the conjecture)

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:     7^2 = 49 = 2*13 + 23;
:     11^2 = 121 = 2*37 + 47;
:     13^2 = 169 = 2*43 + 83;
:     17^2 = 289 = 2*13 + 263;
:     19^2 = 361 = 2*7 + 347;
:     23^2 = 529 = 2*13 + 503.
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