Formula involving primorials that produces from any prime p probably an infinity of semiprimes qr such that r+q-1=np

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Abstract. In this paper I make a conjecture involving primorials which states that from any odd prime p can be obtained, through a certain formula, an infinity of semiprimes q*r such that r + q - 1 = n*p, where n non-null positive integer.

Conjecture:

For any odd prime p there exist an infinity of positive integers m such that p + m*π = q*r, where π is the product of all primes less than p and q, r are primes such that r + q – 1 = n*p, where n is non-null positive integer.

Note that, for p = 3, the conjecture states that there exist an infinity of positive integers m such that 3 + 2*m = q*r, where q and r primes and r + q – 1 = n*p, where n is non-null positive integer; for p = 5, the conjecture states that there exist an infinity of positive integers m such that 5 + 6*m = q*r (...); for p = 7, the conjecture states that there exist an infinity of positive integers m such that 7 + 30*m = q*r (...); for p = 11, the conjecture states that there exist an infinity of positive integers m such that 11 + 210*m = q*r (...) etc.

Note also that m can be or not divisible by p.

Examples:

For p = 3 we have the following relations:
: 3 + 2*11 = 25 = 5*5, where 5 + 5 – 1 = 9 = 3*3;
: 3 + 2*18 = 39 = 3*13, where 3 + 13 – 1 = 15 = 3*5;
The sequence of m is: 11, 18 (...). Note that m can be or not divisible by p.

For p = 5 we have the following relations:
: 5 + 6*25 = 155 = 5*31, where 5 + 31 – 1 = 35 = 7*5;
: 5 + 6*33 = 203 = 7*29, where 7 + 29 – 1 = 35 = 7*5;
The sequence of m is: 25, 33 (...)

For p = 7 we have the following relations:

: 7 + 30*34 = 1027 = 13*79, where 13 + 79 - 1 = 91 = 7*13;

: 7 + 30*49 = 1477 = 7*211, where 7 + 211 - 1 = 217 = 7*31.

The sequence of m is: 34, 49 (...)

For p = 13 we have the following relations:

: 13 + 2310*5 = 11563 = 31*373, where 31 + 373 - 1 = 403 = 31*13;

: 13 + 2310*17 = 39283 = 163*241, where 163 + 241 - 1 = 403 = 31*13.

The sequence of m is: 5, 17 (...)

For p = 17 we have the following relation:

: 17 + 30030*4 = 120137 = 19*6323, where 19 + 6323 - 1 = 6341 = 373*17.

The sequence of m is: 4 (...)