Two conjectures on the quintets of numbers (p, p+20, p+30, p+50, p+80)

Abstract. In this paper I make the following two conjectures: (I) there exist an infinity of quintets of primes (p, p + 20, p + 30, p + 50, p + 80), where p is a prime of the form 6*k - 1; (II) there exist an infinity of primes of the form p\\(p + 20)\\(p + 30)\\(p + 50)\\(p + 80), where p is a number of the form 6*k - 1. I used the operator "\\" with the meaning "concatenated to".

Conjecture 1 :

There exist an infinity of quintets of primes (p, p + 20, p + 30, p + 50, p + 80), where p is a prime of the form 6*k – 1.

The sequence of quintets of primes
(p, p + 20, p + 30, p + 50, p + 80)

: (23, 43, 53, 73, 103);
(59, 79, 89, 109, 139);
(317, 337, 347, 367, 397);
(359, 379, 389, 409, 439);
(389, 409, 419, 439, 469);
(...)

Note that among the numbers obtained this way there exist quintets formed by four primes and a square of prime or quintets formed by four primes and a semiprime.

Conjecture 2 :

There exist an infinity of primes of the form p\\(p + 20)\\(p + 30)\\(p + 50)\\(p + 80), where p is a number of the form 6*k - 1. I used the operator "\\" with the meaning "concatenated to".

The sequence of primes
p\\(p + 20)\\(p + 30)\\(p + 50)\\(p + 80)

: 1131416191, 113133143163193, 137157167187217, 161181191211241, 239259269289319, 263283293313343, 377397407427457, 473493503523553, 479499509529559
(...)

Note that many of the numbers obtained this way are semiprimes.