Abstract. In this paper I make the following three conjectures on primes: (I) there exist an infinity of primes $q$ obtained concatenating to the left a prime $p$ with the number $(p - 1)/2$ (example: for $p = 23$, $q$ is the number obtained concatenating 23 to the left with $(p - 1)/2 = 11$, i.e. $q = 1123$, prime); (II) there exist an infinity of primes $q$ obtained concatenating to the left a prime $p$ with the number $(p + 1)/2$ (example: for $p = 41$, $q$ is the number obtained concatenating 41 to the left with $(p + 1)/2 = 21$, i.e. $q = 2141$, prime); (III) there exist an infinity of pairs of primes $(q_1, q_2)$ where $q_1$ is obtained concatenating to the left a prime $p$ with the number $(p - 1)/2$ and $q_2$ is obtained concatenating to the left the same prime $p$ with the number $(p + 1)/2$.

Conjecture 1:

There exist an infinity of primes $q$ obtained concatenating to the left a prime $p$ with the number $(p - 1)/2$ (example: for $p = 23$, $q$ is the number obtained concatenating 23 to the left with $(p - 1)/2 = 11$, i.e. $q = 1123$, prime.

The sequence of primes $q$:

- $q = 37$ for $p = 7$;
- $q = 919$ for $p = 19$;
- $q = 1429$ for $p = 29$;
- $q = 2143$ for $p = 43$;
- $q = 3061$ for $p = 61$;
- $q = 3673$ for $p = 73$;
- $q = 56113$ for $p = 113$;
- $q = 74149$ for $p = 149$;
- $q = 37$ for $p = 7$;
- $q = 919$ for $p = 19$;
- $q = 1429$ for $p = 29$;
- $q = 2143$ for $p = 43$;
- $q = 3061$ for $p = 61$;
- $q = 3673$ for $p = 73$;
- $q = 56113$ for $p = 113$;
- $q = 74149$ for $p = 149$;
- $q = 613$ for $p = 13$;
- $q = 1123$ for $p = 23$;
- $q = 1531$ for $p = 31$;
- $q = 2347$ for $p = 47$;
- $q = 3571$ for $p = 71$;
- $q = 50101$ for $p = 101$;
- $q = 63127$ for $p = 127$;
- (...) (for $p > 127$).

Conjecture 2:

There exist an infinity of primes $q$ obtained concatenating to the left a prime $p$ with the number $(p + 1)/2$ (example: for $p = 41$, $q$ is the number obtained concatenating 41 to the left with $(p + 1)/2 = 21$, i.e. $q = 2141$, prime.

The sequence of primes $q$:

- $q = 47$ for $p = 7$;
- $q = 1223$ for $p = 23$;
- $q = 2243$ for $p = 19$;
- $q = 2753$ for $p = 53$;
- $q = 3467$ for $p = 67$;
- $q = 4079$ for $p = 79$;
- $q = 52103$ for $p = 103$;
- $q = 70139$ for $p = 139$;
- $q = 5362104723$ for $p = 104723$;
- $q = 1019$ for $p = 19$;
- $q = 2141$ for $p = 41$;
- $q = 2447$ for $p = 47$;
- $q = 2753$ for $p = 53$;
- $q = 3671$ for $p = 71$;
- $q = 4283$ for $p = 83$;
- $q = 55109$ for $p = 109$;
- (...) (for $p > 109$).
Conjecture 3:

There exist an infinity of pairs of primes \((q_1, q_2)\) where \(q_1\) is obtained concatenating to the left a prime \(p\) with the number \((p - 1)/2\) and \(q_2\) is obtained concatenating to the left the same prime \(p\) with the number \((p + 1)/2\).

The sequence of pairs of primes \((q_1, q_2)\):

\[
\begin{align*}
(q_1, q_2) &= (37, 47) \text{ for } p = 7; \\
(q_1, q_2) &= (919, 1019) \text{ for } p = 19; \\
(q_1, q_2) &= (1123, 1223) \text{ for } p = 23; \\
(q_1, q_2) &= (2143, 2243) \text{ for } p = 43; \\
(q_1, q_2) &= (2347, 2447) \text{ for } p = 47; \\
(q_1, q_2) &= (3571, 3671) \text{ for } p = 71;
\end{align*}
\]
(...)

Observation:

Note the pairs of twin primes \((41, 43)\) and \((71, 73)\) and the corresponding pairs of twin primes \((2141, 2143)\) and \((3671, 3673)\) obtained with the formula above.