Abstract. These conjectures state that any prime $p$ greater than 60 can be written as a sum of three primes of a certain type from the following four ones: $10k + 1$, $10k + 3$, $10k + 7$ and $10k + 9$.

Conjecture 1a:

Any prime $p$ of the form $10k + 1$, $p > 60$, can be written as a sum of three primes of the following forms:

\[ 10x + 1, 10y + 1 \text{ respectively } 10z + 1. \]

Examples:

\[ 61 = 11 + 31 + 19; \]
\[ 71 = 11 + 31 + 29 = 11 + 41 + 19. \]

Conjecture 1b:

Any prime $p$ of the form $10k + 1$, $p > 60$, can be written as a sum of three primes of the following forms:

\[ 10x + 1, 10y + 3 \text{ respectively } 10z + 7. \]

Examples:

\[ 61 = 41 + 13 + 7 = 31 + 23 + 7 = 31 + 13 + 17; \]
\[ 71 = 41 + 23 + 7 = 41 + 13 + 17 = 31 + 23 + 7. \]

Conjecture 1c:

Any prime $p$ of the form $10k + 1$, $p > 60$, can be written as a sum of three primes of the following forms:

\[ 10x + 7, 10y + 7 \text{ respectively } 10z + 7. \]

Examples:

\[ 61 = 7 + 17 + 37 = 7 + 7 + 47; \]
\[ 71 = 17 + 17 + 37 = 7 + 17 + 47. \]

Conjecture 1d:

Any prime $p$ of the form $10k + 1$, $p > 60$, can be written as a sum of three primes of the following forms:

\[ 10x + 3, 10y + 9 \text{ respectively } 10z + 9. \]
Examples:
: $61 = 13 + 19 + 29 = 23 + 19 + 19$;
: $71 = 23 + 19 + 29 = 13 + 29 + 29$.

Conjecture 2a:

Any prime $p$ of the form $10k + 3$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 1$, $10y + 1$ respectively $10z + 1$.

Conjecture 2b:

Any prime $p$ of the form $10k + 3$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 1$, $10y + 3$ respectively $10z + 9$.

Conjecture 2c:

Any prime $p$ of the form $10k + 3$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 3$, $10y + 3$ respectively $10z + 7$.

Conjecture 2d:

Any prime $p$ of the form $10k + 3$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 7$, $10y + 7$ respectively $10z + 9$.

Conjecture 3a:

Any prime $p$ of the form $10k + 7$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 1$, $10y + 3$ respectively $10z + 3$.

Conjecture 3b:

Any prime $p$ of the form $10k + 7$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 3$, $10y + 7$ respectively $10z + 7$.

Conjecture 3c:

Any prime $p$ of the form $10k + 7$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 1$, $10y + 7$ respectively $10z + 9$.

Conjecture 3d:

Any prime $p$ of the form $10k + 7$, $p > 60$, can be written as a sum of three primes of the following forms:
: $10x + 9$, $10y + 9$ respectively $10z + 9$. 
Conjecture 4a:

Any prime p of the form 10*k + 9, p > 60, can be written as a sum of three primes of the following forms:
: 10*x + 1, 10*y + 1 respectively 10*z + 7.

Conjecture 4b:

Any prime p of the form 10*k + 9, p > 60, can be written as a sum of three primes of the following forms:
: 10*x + 3, 10*y + 3 respectively 10*z + 3.

Conjecture 4c:

Any prime p of the form 10*k + 9, p > 60, can be written as a sum of three primes of the following forms:
: 10*x + 3, 10*y + 7 respectively 10*z + 9.

Conjecture 4d:

Any prime p of the form 10*k + 9, p > 60, can be written as a sum of three primes of the following forms:
: 10*x + 1, 10*y + 9 respectively 10*z + 9.

Addenda

In one of my previous papers, “Two conjectures that relates any Poulet number by a type of triplets respectively of duplets of primes” I made the following two conjectures:

Conjecture:

Any square of a prime of the form p^2 = 10*k + 1 can be written as p^2 = x + y + z, where x, y, z are primes, not necessarily all three distinct, of the form 10*k + 7.
Examples:
: 11^2 = 121 = 37 + 37 + 47;
: 19^2 = 361 = 7 + 37 + 317.

Conjecture:

Any square of a prime of the form p^2 = 10*k + 9 can be written as p^2 = x + y + z, where x, y, z are primes, not necessarily all three distinct, of the form 10*k + 3.
Examples:
: 7^2 = 49 = 13 + 13 + 23;
: 19^2 = 169 = 13 + 43 + 113.