Solution for Goldbach Conjecture

Wilber Valgusbitkevyt

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Abstract: $\forall X \geq 4 \quad \wedge \quad X \in$ Positive Integer $\implies \exists A$, a positive integer such that $X - A, X + A$ are Prime numbers. The sum equals 2X, which represents all even numbers for X $\geq$ 4. For X = 2 and 3, 2X are 2 + 2 and 3 + 3. Hence, Goldbach Conjecture is true.

Proof: Goldbach's Conjecture states that for all even numbers greater than 4, there are two prime numbers that add up to the number. We are considering all even numbers 2X such that X $\geq$ 4 because even numbers 4 and 6 are 2 + 2 and 3 + 3.

Consider e + 1 prime numbers less than X + A. Consider the corresponding modular arithmetics.
X - A $(\text{mod} P_1) = J_1, ..., X - A(\text{mod} P_e) = J_e$
$X(\text{mod} P_1) = I_1, ..., X(\text{mod} P_e) = I_e$
$A(\text{mod} P_1) = I_1 - J_1, ..., A(\text{mod} P_e) = I_e - J_e$
$X + A(\text{mod} P_1) = 2I_1 - J_1, ..., X + A(\text{mod} P_e) = 2I_e - J_e$

Now, is there always a prime number X + A for some prime number X - A.
In other words: Given $J_1, ..., J_e \neq 0, \forall q \quad 2I_q - J_q \neq 0$.
In other words, $2I_q(\text{mod} P_q) \neq J_q$. But $X - A(\text{mod} P_q) = J_q$.
Hence, $2I_q(\text{mod} P_q) \neq X - A$
Rearrange this equation: $X - A(\text{mod} P_q) = 2I_q$.
But, $X(\text{mod} P_q) = I_q,$ which means $2X(\text{mod} P_q) = 2I_q$.
Hence, $X - A(modPq) \neq 2X$.

If there exists X - A such that $\forall q \quad X - A(\bmod Pq) \neq 2X,$ then Goldbach Conjecture is true.

I am going to create a three-dimensional sequence called Victoria Hayanisel Sequence:
V 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, ...
2 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, ...
3 1, 2, 0, 1, 2, 0, 1, 2, 0, 1, ...
5 1, 2, 3, 4, 0, 1, 2, 3, 4, 0, ...
....

The first row is just the sequence of positive integers. The first column is the sequence of prime numbers. The other rows are the sequence of the remainders when the first column divides the first row.

Given i prime numbers, there are P_1 x ... x P_i number of combinations of the remainders.

Given a specific set of remainders, there are (P_1 - 1) x ... x (P_i - 1) number of different possible combination of remainders.

The answer is yes, and there are (P_1 - 1) x ... x (P_i - 1) number of them.

Since 2X is an even number, we are interested in odd prime numbers, and odd prime numbers are always not divisible by 2, we can forget about 2. Hence, lets consider only from 3. Now, the question is, is one of them a prime number? The answer is yes. There are at least (P_2 - 2) x ... x (P_i - 2) number of them.

This is always bigger than 0, because whatever the given set of remainders are, exclude them and 0s from each rows. so that it would be prime because its remainders are set of non-zeros and each element is different from the given set of remainders. To be accurate we would exclude itself, but it is irrelevant for this as it makes no difference because it is still bigger than 0.

Hence, given X - A (mod P_q) $\neq 2X$for all positive integer q, X + A has to be a prime number, and their sum is 2X for all X ¿= 4.

For 2X when X = 2 and X = 3, 2X can be assigned 2 + 2 and 3 + 3 to it. For the rest, the proof is applicable. There exists at least one such X - A for all X and 2X.

Hence, Goldbachs Conjecture is true for all even numbers.