

On Goldbach conjecture  
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Abstract:

on Goldbach conjecture stating that every number  $>$  greater than 2 is the sum of 3 primes, and even integers is sum of 2 primes.

$\forall n \in \mathbb{Z}$  , let assume  $n$  (including primes) can be written as  $(n-1)+1$

let assume:

$(n-1)+1$  is the sum of the primes

$P_n$  are the set of prime numbers, thus  $\{P_1, P_2, \dots, P_{n+1}\}$

$H$  is the height (quantity of primes; thus number of addends)

By using the definition above we can formulate:

$$(P_1 - 1) + (P_2 - 1) + H = (n - 1) + 1$$

example 1 (even integer sum):

$$P_1 = 7$$

$$P_2 = 11$$

$$(7-1) + (11-1) + 2 = 17+1$$

$$6+10+2=17+1$$

$$6+10+2-1=17$$

$$6+10+1=17$$

$$17=17$$

example 2(odd integer sum):

$$P_1 = 1$$

$$P_2 = 7$$

$$P_3 = 11$$

$$(1-1) + (7-1) + (11-1) + 3 = 18+1$$

$$0+6+10+3=18+1$$

$$0+6+10+3-1=18$$

$$6+10+2=18$$

$$18=18$$

thus we proved  $\forall n \in \mathbb{Z}$  can be written as sum of 2 or more primes.