

Goldbach's conjecture proven

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Goldbach's conjecture is one of the oldest and best-known unsolved problems in number theory and all of mathematics. It states that every even natural number greater than 2 is the sum of two prime numbers.

A prime number must be an odd number

The sum of 2 odd numbers is an even number

Then **The sum of two prime numbers is an even number (A).**

Erdős Theorem : For every integer $n > 1$, it exists always a prime number between n and $2n$

(Source : Le Beau livre des Maths De Pythagore à la 57 dimension
DUNOD edition, author Clifford A.Pickover)

By récurrence of Erdős Theorem mentioned above and **(A)**

There is always k even number which is the sum of two prime numbers p and q . (B)

p for n $n \leq p \leq 2n$ (i)

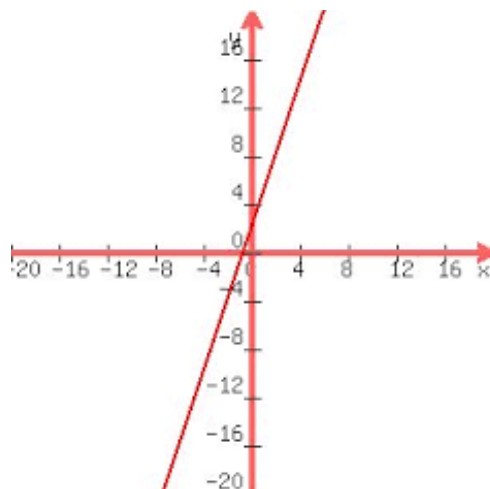
q for $n/2$ $n/2 \leq q \leq n$ (j)

(i) + (j) $n + n/2 \leq p+q \leq 3n$ ie

$3n/2 \leq p+q \leq 3n$ wich implies

$k = p + q$ is an even number because of (A) and n integer > 1 and k is between lower limit $3n/2$ and upper limit $3n$

$f(x) = 3x/2$ and $g(x) = 3x$ the two $f(x)$ and $g(x)$ are linear function the area between them that intersect for $x > 0$ contains points solutions which are sum of p and q prime numbers and their abscissa are x integer > 1 . (B)



We can state as we have (A) and (B) : every even natural number greater than 2 is the sum of 2 prime numbers.

(what needed to be demonstrated) Goldbach's conjecture proven.

-- Minds, like parachutes, function best when open. ,,,

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| Github : <https://www.github.com/didipostman>