

Goldbach's conjecture

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Abstract

I proved the Goldbach's conjecture. Even numbers are prime numbers and prime numbers added, but it has not been proven yet whether it can be true even for a huge number (forever huge number).

All prime numbers are included in $(6n - 1)$ or $(6n + 1)$ except 2 and 3 (n is a positive integer).

All numbers are executed in hexadecimal notation. This does not change even in a huge number (forever huge number).

The larger the even value, the more the number of prime number plus prime number that become even.

That is because the number of rotations of the hexagon increases.

The number is infinite. the number circulate this hexagon infinite.

key words

Hexadecimal rotation, Prime number, Goldbach's conjecture, Probabilistically

Introduction

$(6n - 2)$, $(6n)$, $(6n + 2)$ in are even numbers.

$(6n - 1)$, $(6n + 1)$, $(6n + 3)$ are odd numbers.

prime numbers are $(6n - 1)$ or $(6n + 1)$. Except 2 and 3. (n is positive integer).

(Even numbers greater than 2 are all sums of two prime numbers, below)

(n is a positive integer)

$$4 = 2 + 2$$

$$6 = 3 + 3$$

$$8 = 3 + (6n - 1), 3 + 5, n = 0, 1$$

$$10 = (6n - 1) + (6n - 1), 5 + 5, n = 1, 1$$

$$12 = (6n - 1) + (6n + 1), 5 + 7, n = 1, 1$$

$$14 = (6n + 1) + (6n + 1), 7 + 7, n = 1, 1$$

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$16=(6n-1)+(6n-1), 5+11, n=1,2$
 $18=(6n+1)+(6n-1), 7+11, n=1,2$
 $20=(6n+1)+(6n+1), 7+13, n=1,2$
 $22=(6n-1)+(6n-1), 11+11, n=2,2$
 $24=(6n-1)+(6n+1), 11+13, n=2,2$
 $26=(6n+1)+(6n+1), 13+13, n=2,2$
 $28=(6n-1)+(6n-1), 11+17, n=2,3$
 $30=(6n-1)+(6n+1), 11+19, n=2,3$
 $32=(6n+1)+(6n+1), 13+19, n=2,3$
 $34=(6n-1)+(6n-1), 17+17, n=3,3$
 $36=(6n-1)+(6n+1), 17+19, n=3,3$
 $38=(6n+1)+(6n+1), 19+19, n=3,3$
 $40=(6n-1)+(6n-1), 17+23, n=3,4$
 $42=(6n+1)+(6n-1), 19+23, n=3,4$
 $44=(6n+1)+(6n+1), 13+31, n=2,5$
 $46=(6n-1)+(6n-1), 23+23, n=4,4$
 $48=(6n+1)+(6n-1), 19+29, n=3,5$
 $50=(6n+1)+(6n+1), 19+31, n=3,5$
 $52=(6n-1)+(6n-1), 23+29, n=4,5$
 $54=(6n-1)+(6n+1), 23+31, n=4,5$
 $56=(6n+1)+(6n+1), 13+43, n=2,7$
 $58=(6n-1)+(6n-1), 29+29, n=5,5$
 $60=(6n-1)+(6n+1), 29+31, n=5,5$
 $62=(6n+1)+(6n+1), 31+31, n=5,5$
 $64=(6n-1)+(6n-1), 23+41, n=4,7$
 $66=(6n-1)+(6n+1), 23+43, n=4,7,.....$
 $68=(6n+1)+(6n+1), 31+37, n=5,6$
 $70=(6n-1)+(6n-1), 29+41, n=5,7$
 $72=(6n+1)+(6n-1), 31+41, n=5,7$
 $74=(6n+1)+(6n+1), 37+37, n=6,6$
 $76=(6n-1)+(6n-1), 29+47, n=5,8,.....$
 $78=(6n+1)+(6n-1), 37+41, n=6,7$
 $80=(6n-1)+(6n-1), 29+59, n=5,10$
 $82=(6n-1)+(6n-1), 41+41, n=7,7$
 $84=(6n-1)+(6n+1), 41+43, n=7,7$
 $86=(6n+1)+(6n+1), 43+43, n=7,7$
 $88=(6n-1)+(6n-1), 41+47, n=7,8$
 $90=(6n-1)+(6n+1), 29+61, n=5,10$
 $92=(6n+1)+(6n+1), 31+61, n=5,10$
 $94=(6n-1)+(6n-1), 47+47, n=8,8$
 $96=(6n-1)+(6n+1), 47+49, n=8,8$
 $98=(6n+1)+(6n+1), 37+61, n=6,10$
 $100=(6n-1)+(6n-1), 41+59, n=7,10$
 $102=(6n-1)+(6n+1), 41+61, n=7,10$
 $104=(6n+1)+(6n+1), 43+61, n=7,10$
 $106=(6n-1)+(6n-1), 53+53, n=9,9$
 $108=(6n-1)+(6n+1), 47+61, n=8,10$

$110=(6n+1)+(6n+1), 43+67, n=7,11$
 $112=(6n-1)+(6n-1), 53+59, n=9,10$
 $114=(6n-1)+(6n+1), 53+61, n=9,10$
 $116=(6n+1)+(6n+1), 43+73, n=7,12,\dots\dots$
 $118=(6n-1)+(6n-1), 59+59, n=10,10$
 $120=(6n-1)+(6n+1), 59+61, n=10,10$
 $122=(6n+1)+(6n+1), 61+61, n=10,10$
 $124=(6n-1)+(6n-1), 53+71, n=9,12$
 $126=(6n-1)+(6n+1), 53+73, n=9,12,\dots\dots$
 $128=(6n+1)+(6n+1), 61+67, n=10,11$
 $130=(6n-1)+(6n-1), 59+71, n=10,12$
 $132=(6n-1)+(6n+1), 59+73, n=10,12$
 $134=(6n+1)+(6n+1), 67+67, n=11,11$
 $136=(6n-1)+(6n-1), 53+83, n=9,14,\dots\dots$
 $138=(6n-1)+(6n+1), 59+79, n=10,13$
 $140=(6n+1)+(6n+1), 67+73, n=11,12$
 $142=(6n-1)+(6n-1), 71+71, n=12,12$
 $144=(6n-1)+(6n+1), 71+73, n=12,12$
 $146=(6n+1)+(6n+1), 73+73, n=12,12$
 $148=(6n-1)+(6n-1), 59+89, n=10,15$
 $150=(6n-1)+(6n+1), 71+79, n=12,13$
 $152=(6n+1)+(6n+1), 73+79, n=12,13$
 $154=(6n-1)+(6n-1), 71+83, n=12,14$
 $156=(6n+1)+(6n-1), 73+83, n=12,14$
 $158=(6n+1)+(6n+1), 79+79, n=13,13$
 $154=(6n-1)+(6n-1), 71+83, n=12,14$
 $156=(6n+1)+(6n-1), 73+83, n=12,14$
 $158=(6n+1)+(6n+1), 79+79, n=13,13$
 $160=(6n-1)+(6n-1), 71+89, n=12,15$
 $162=(6n-1)+(6n+1), 59+103, n=10,17$
 $164=(6n+1)+(6n+1), 73+91, n=12,15$
 $166=(6n-1)+(6n-1), 83+83, n=14,14$
 $168=(6n-1)+(6n+1), 83+85, n=14,14$
 $170=(6n+1)+(6n+1), 85+85, n=14,14$
 $172=(6n-1)+(6n-1), 71+101, n=12,17$
 $174=(6n-1)+(6n+1), 71+103, n=12,17$
 $176=(6n+1)+(6n+1), 73+103, n=12,17$
 $178=(6n-1)+(6n-1), 89+89, n=15,15$
 $180=(6n-1)+(6n+1), 83+97, n=14,16$
 $182=(6n+1)+(6n+1), 79+103, n=13,17$
 $184=(6n-1)+(6n-1), 83+101, n=14,17$
 $186=(6n-1)+(6n+1), 89+97, n=15,16$
 $188=(6n+1)+(6n+1), 61+127, n=10,21$
 $190=(6n-1)+(6n-1), 89+101, n=15,17$
 $192=(6n-1)+(6n+1), 83+109, n=14,18$
 $194=(6n+1)+(6n+1), 97+97, n=16,16$
 $196=(6n-1)+(6n-1), 83+113, n=14,19$

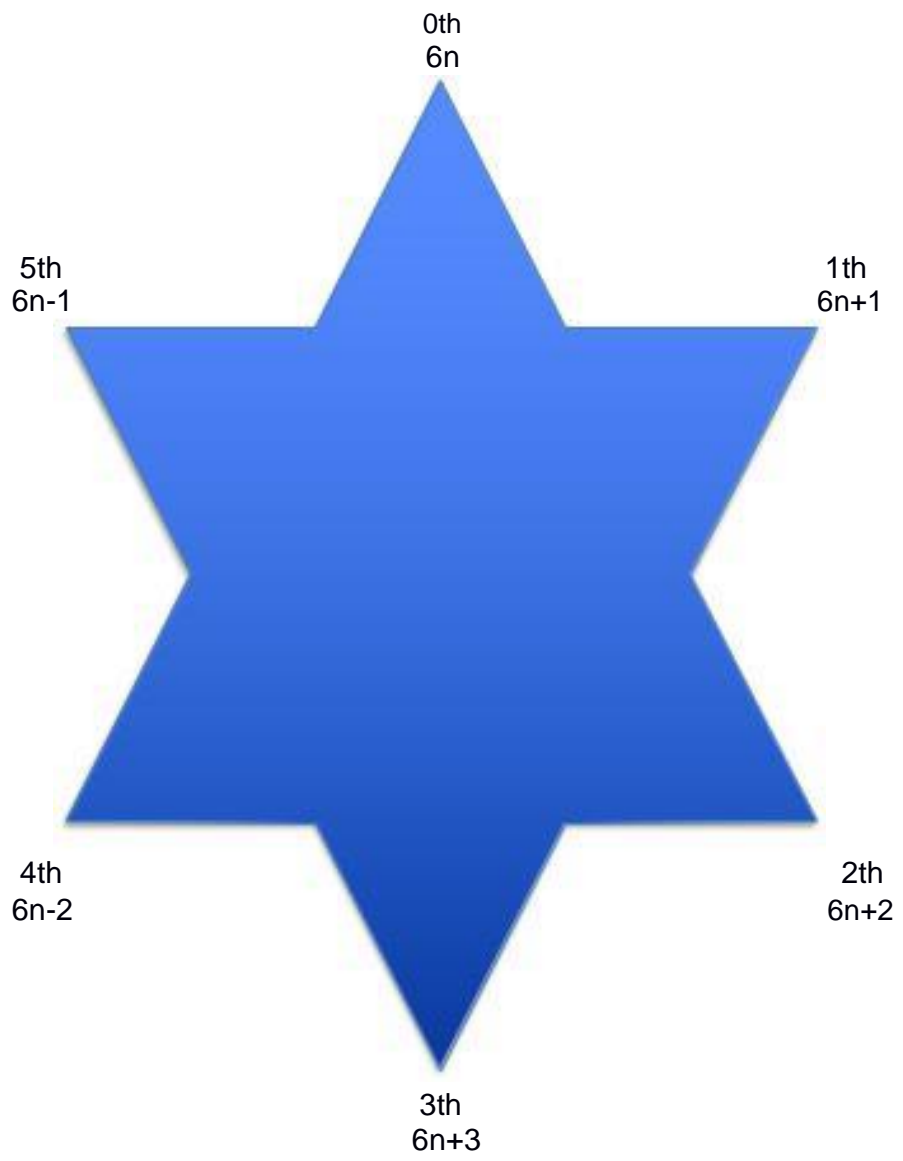
$198=(6n-1)+(6n+1)$, $89+109$, $n=15,18$
 $200=(6n+1)+(6n+1)$, $97+103$, $n=16,17$
 $202=(6n-1)+(6n-1)$, $101+101$, $n=17,17$
 $204=(6n-1)+(6n+1)$, $101+103$, $n=17,17$
 $206=(6n+1)+(6n+1)$, $103+103$, $n=17,17$
 $208=(6n-1)+(6n-1)$, $101+107$, $n=17,18$
 $210=(6n-1)+(6n+1)$, $101+109$, $n=17,18$
 $212=(6n+1)+(6n+1)$, $103+109$, $n=17,18$
 $214=(6n-1)+(6n-1)$, $107+107$, $n=18,18$
 $216=(6n-1)+(6n+1)$, $107+109$, $n=18,18$
 $218=(6n+1)+(6n+1)$, $109+109$, $n=18,18$
 $220=(6n-1)+(6n-1)$, $107+113$, $n=18,19$
 $222=(6n-1)+(6n+1)$, $89+133$, $n=15,22$
 $224=(6n+1)+(6n+1)$, $97+127$, $n=16,21$

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These are just examples, and there are several combinations of prime numbers in these small even numbers.

For example, 224 includes not only $97+127$ but also $151+73$, $157+67$, $163+61$, $181+43$, $193+31$, $211+13$.



Discussion

Simply calculate,

The probability of $(6n - 1) + (6n - 1)$ is $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$.

The probability of $(6n - 1) + (6n + 1)$ is also $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$.

The probability of $(6n + 1) + (6n - 1)$ is also $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$.

The probability of $(6n + 1) + (6n + 1)$ is also $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$.

These totals are $\frac{1}{36} + \frac{1}{36} + \frac{1}{36} + \frac{1}{36} = \frac{1}{9}$.

Every time it rotate the hexagon, $\frac{1}{9}$ is doubled.

That is, when the hexagon is rotated nine times, it becomes 1 or 100%.

If the hexagon is rotated 90 times, it becomes 10 or 1000%.

When the hexagon is rotated 900 times, it becomes 100, that is, 10000%.

When the hexagon is rotated 90,000, it becomes 10,000, that is, 1000000%.

When the hexagon is rotated 900,000,000, it becomes 100,000,000, that is, 10000000000%.

When the hexagon is rotated 900,000,000,000, it becomes 100,000,000,000, that is, 10000000000000%.

Of course, $(6n - 1) + (6n - 1)$, $(6n - 1) + (6n + 1)$, $(6n + 1) + (6n - 1)$, $(6n + 1) + (6n + 1)$, some of them are not combinations of prime numbers.

But probabilistically, every even number can be confirmed as a combination of primes and primes.

In this way, it can be confirmed that the Goldbach conjecture is probabilistically correct.

Proof end.

References

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