The theory of the infinity of primes, twins.

The theory allows for a new, a different look at the problem, and it is possible that those prisoners who are in theory, be enough to acknowledge that the problem of the twin primes making!

(Author of the theory, Valery Demidovich)

Of all the services that can be rendered to science, introduction of new ideas is the most important.

(J.J. Thomson)

The theory of the infinity of primes, twins.

By constructing a matrix of the series shows a general principle of the emergence of prime numbers of single and twin primes. The proof of infinity of primes, twins based on the theoretical disappearance of the twin prime numbers with ([n,n+2]) the Matrix series 2-3. This process tends not to 0, and to plus infinity.

It also presented evidence that all options for the location of two primes, relative to each other ([n, n + a]) during the piercing tend not 0 limit, as well as plus infinity.

The set of numbers Sophie Germain ([n, 2n + 1]), in particular, and the set of all [n, n + a] in isolation, with piercing have a limit of plus infinity.

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1. Introduction.

Euclid's proof of infinity of the set of prime numbers based on the features of the relationship of prime numbers. Further, to establish a set of primes, twins, is leaving to one side. Made allowance for twin primes in a natural series of numbers to determine patterns of occurrence of twins with respect to periods of natural numbers.

In this paper, to determine the set of primes, twins, chosen a different path. Going back to the sieve of Eratosthenes. It takes endless sieve of Eratosthenes, and produced a gradual perforation. For convenience, from this sieve removes all even numbers. Initially, there puncturing numbers divisible by 3. As a result, it was established that, now, on the natural numbers is an infinite set of pairs formed, which is defined as the initial infinite number of pairs. In fact, this candidate in the prime of twins. Further, it was necessary to ascertain how many couples will not punctured after just an infinite set of piercing. This residue and will be a real set of primes, twins.

During the piercing, it was possible to establish the order of perforation. How many pairs of pierced one of those who previously were not pierced, piercing at once (one perforation, puncturing it on the sieve of Eratosthenes numbers divisible by which one is a number):

$2/n$ n - primes in order of location in the natural series of numbers.

If we are pierced by a sieve numbers that are divisible by 17, then one of those pairs, which were not punctured during the piercing with numbers 5,7,11,13, now pierced out of 17 is not punctured pairs to 2 pairs.

Thanks to the established order, piercing, it is possible to determine the value of the average passage of puncturing, ie, the average number of pairs in the puncture, we were at piercing. How many couples are not punctured, the average ranged between points of piercing.

Prediction was made. If the twin primes is a finite set, then the value of the average transmission should be the limit of 0. If the twin primes is an infinite set, then the value of the average passage may have a limit plus infinity. And if the limit plus infinity, then the set can not be finite.

Setting a limit of transmission to plus-infinity, such a result was presented evidence that the twin primes is an infinite set!

Moreover, it is shown here that the proof of the value of passage for a couple applies for the proof of the value of passage of all variants of two primes, relative to each other. Limit they can be the same as that of steam - plus infinity.

In principle, this rule can be extended to other, more complex arrangement, not two but more than numbers. And not only that.

Work performed in free style, and sometimes some places are far from a strictly mathematical language of presentation. Such an assumption is made for the sake of simplicity, the essence of the topic. As for the proof of the limit value of the passage, then, there have already complied with the severity of the mathematical language of presentation.

Yours sincerely author Valery Demidovich 22.03.2010

2.Return to the sieve of Eratosthenes!

Take the sieve of Eratosthenes, and lengthen his 1000 numbers, to infinity, removing all the even numbers. Such a simplification does not affect the course of treatment.

Pierce all the numbers that are divisible by 1. What do we see? The fact that pierced all the numbers. We have this option piercing:

n × 1

shall not be considered.

Look at the outcome of further perforation. What it can lead us?

Pierce all the numbers that are divisible by 3:

3,9,15,21,27,33,...∞

We are out of 3 members of the initial infinite set, pierced by a number. What do we see more? Between the points of piercing (which we shall call a step piercing) found couples are not punctured numbers:

5-7,11-13,17-19,23-25,...∞

Before us is a couple who are, or destined or not destined to be the twin primes. Now, however, have a couple:

5-7,11-13

rightfully belong to the twin primes, as are up to $5^2 = 25$, that is, until the next number of perforation, which was built in a square.

Piercing the new numbers, starting with n^2.

These mathematical patterns, after piercing the numbers divisible by 3, we define as the Matrix series 2-3, and enumerate an infinite set of pairs of natural numbers. Now we are starting an infinite set is equal to $\aleph_(0)$.

Textit (number) Matrix - the order of the set of numbers on a number of natural numbers (the sieve of Eratosthenes), after piercing the numbers are divisible by a certain finite set of primes.

With the Matrix series, we are building a mega-matrix series.

Textit (Mega-Matrix series) - the order and arrangement of simple and complex (including semi-) numbers on the natural series of numbers after an infinite set of piercing through all primes.

We see that in the Matrix series 2-3, an infinite number of repetitions of pairs, and all these repetitions are the same length.

We define them, and repetition is called the internal steps of the Matrix series.

Step Inside the Matrix series (V) - The Matrix series, each member of of internal steps, many of which is infinite.

The length of the internal steps of the Matrix series - is the result of multiplying numbers who participated in the piercing, multiplied by 2. (For example, the Matrix series 2-3-5-7-11 (2-11) $2\times3\times5\times7\times11 = 2310).Evennumbersonthesieveof Eratosthenes, weuseonl$

3.Marking tasks.

Those couples who were formed after perforation of numbers divisible by 3, denoted as the initial infinite number of pairs equal to $\aleph_(0)$. We just now have to find out how many pairs remain, after an infinite set of piercing, prime numbers are infinite. Will certainly be a subset or infinite? The remaining subset is a subset of longer pairs, and primes, twins!

4.Problem Solving.

With the following 3 prime 5, we pierce to the sieve of Eratosthenes pair, one of the numbers is divisible by 5. We have a couple can pierce just one number, since the puncturing step is greater than the distance between the numbers in the pair. The value of the distance between the numbers in the pair is 2.

At the same time we must not forget that we have a pair of positive integers numbered separately. A very natural numbers remained unchanged. So the pair number 1, is number two in the natural series of numbers, it's 5 and 7. For example, if we have slashed the number 35, with the prime 5, we note and puncture pair number 6 (33-35).

step size perforation (R) - the step piercing, is:

$$\text{N } \times 2 = R$$

N - number of perforation.

$\times2-$due to the fact that we only work with odd numbers on the sieve of Eratosthenes.

Now we have built the Matrix series 2-3-5, with the length of the internal steps:

$$V = 2 \times 3 \times 5 = 30$$

On the Matrix series 2-3-5 formed an infinite number of internal steps:

0-30,30-60,60-90,...∞

For simplicity, we now recalculate the pair at the internal steps (S) of the Matrix series 2-3-5. Their will be 3. It is necessary to make adjustment of internal steps to properly calculate the steam on them. If we assume strictly, for example, to 30, then we 29 will not couple and the next internal step 31, the same will not pair. But overall this is a pair, and therefore the calculation for the accuracy of counting of pairs, we believe the pair at the intervals:

0-31,32-61,62-91,...∞

Next, consider how much R to V:

$$\frac{30}{5\times2} = 3 = R_s$$

And now and get the value of the passage (X):

$$X = \frac{S}{R_S} = \frac{3}{3} = 1$$

The value of the passage (X) - after a perforation of the sieve of Eratosthenes, we made an infinite number of steps piercing (U_{s_n}),and in the end it remains an infinite number of pairs is not punctured(Q_{r_n}).

$$X = \frac{Q_{r_n}}{U_{s_n}}$$

The value of transmission is determined on a single internal step, the Matrix series, and such a definition we refer to the entire Matrix series, as it consists of an infinite set and most importantly, the same internal steps. The value of the passage of this if we take the remaining set of pairs, and uniformly expanded between an infinite number of steps piercing.

The turn of puncture on the sieve of Eratosthenes (advanced to the sieve with odd numbers) numbers are divisible by 7. It can still be called as the imposition of patterns are a number of 7, ie the natural numbers, to impose a series sweep with a piercing points that pierce the number divisible by 7. Do this and get the Matrix series 2-3-5-7.

Now the length of the internal steps of the new Matrix series consists of 7 internal steps preceding the Matrix series 2-3-5, and is equal to 210. Number of steps piercing:

$$\frac{210}{7\times2} = 15$$

We still have this number and the number of points to pierce the inner step of the Matrix series 2-3-5-7:

7-21-35-49-63-77-91-105-119-133-147-161-175-189-203

And also equal to the number of odd numbers on the domestic stage preceding the Matrix series 2-3-5:

1-3-5-7-9-11-13-15-17-19-21-23-25-27-29

And since the inner step of the Matrix series 2-3-5-7 consists of internal steps of the Matrix series 2-3-5, the number of odd numbers on the domestic stage of the Matrix series 2-3-5-7 will be:

$$15 \times 7 = 105$$

So, at piercing the numbers divisible by 7, we can in each internal step of the Matrix series 2-3-5-7, the 105 numbers that pierce only 15. And that $\frac{1}{7}$ part, that is, out of 7 numbers puncture 1. Couple with us includes 2 numbers, so that would remove a pair, enough to pierce one of the numbers of couples. And we do it twice, from this puncturing vapor occurs at a ratio of $\frac{2}{7}$. And, in general, it is $\frac{2}{n}$, where n, is a prime of the order of the in-kind series of numbers.

The process of piercing, defined as *correct reading Alphabet*, and thus imagine that we have an alphabet with an infinite set of letters.

5. THE CORRECT READING OF THE ALPHABET.

For example, take a step The Matrix series 5.3, and each number will give letter of the alphabet. Further, as we know, for the formation step of the Matrix series 3-5-7, taken 7 steps of the Matrix series 3-5. Now, on each such step, all the figures denote the letters of the alphabet in order, starting with the first digit of each internal step of the Matrix series 2-3-5. And for that to distinguish the location of the letters, we enumerate the letters, depending on the serial number of internal steps of the Matrix series 2-3-5.

Now look at the reading of the alphabet with perforation of numbers divisible by 7:

1	A_1						
3	B_1	A_2					
5	C_1	B_2	A_3				
7	D_1	C_2	B_3	A_4			
9	E_1	D_2	C_3	B_4	A_5		
11	F_1	E_2	D_3	C_4	B_5	A_6	
13	G_1	F_2	E_3	D_4	C_5	B_6	A_7
15	H_1	G_2	F_3	E_4	D_5	C_6	B_7
17	I_1	H_2	G_3	F_4	E_5	D_6	C_7
19	J_1	I_2	H_3	G_4	F_5	E_6	D_7
21	K_1	J_2	I_3	H_4	G_5	F_6	E_7
23	L_1	K_2	J_3	I_4	H_5	G_6	F_7
25	M_1	L_2	K_3	J_4	I_5	H_6	G_7
27	N_1	M_2	L_3	K_4	J_5	I_6	H_7
29	O_1	N_2	M_3	L_4	K_5	J_6	I_7
		O_2	N_3	M_4	L_5	K_6	J_7
			O_3	N_4	M_5	L_6	K_7
				O_4	N_5	M_6	L_7
					O_5	N_6	M_7
						O_6	N_7
							O_7

Pattern number 7, after passing the Matrix ryada3-7, which consists of matrices ryada3-5, "read"the entire alphabet:

$$A_4 - B_3 - C_2 - D_1 - E_7 - F_6 - G_5 - H_4 - I_3 - J_2 - K_1 - L_7 - M_6 - N_5 - O_4$$

As we see, puncturing at "reading ", a single letter is not missed, and the same letter, read once. And so as a prime-single is one letter, from 7 options, she "read"once. But prime numbers twin occupy two letters, and piercing, are already "read"two letters. And finally, two pairs of 7 pierced.

That's how the piercing, and from their work, we get the formula to calculate the pairs and singles in the Matrix series.

6. Formula, by which is determined by the number of pairs in the internal step of the Matrix series.

Number of singles and couples, the number of perforation on the inner step of the Matrix series of specific, difficult to assess. And this number is represented on all interior concrete steps of the Matrix series.

s_1 *- the number of pairs in the previous Matrix series.*
b_1 *- the number of singles on the previous Matrix series.*
n - the number of new piercing, the new The Matrix series 3 ...- N.
s_2 *- the number of pairs on the Matrix series3 ...-N.*
b_2 *- the number of singles on the Matrix series3 ...-N.*

$s_2 = s_1 \times (n-2)$
$b_2 = (b_1 \times n) - b_1 + 2s_1$

(*Note. Internal step we're running at a point on which both sides at a distance of 1, are simple single, which is a pair. If you approach strictly to count the number of couples and singles to this point (ie the internal step matrix of the series) it is necessary to take this one alone, because the second is obtained at another internal step. But in general this pair. Therefore, to count, we take that amount, which is located on the "inner step of the Matrix series 1. This is done for accuracy calculations, since the case definition counts to this point, we will not count the actual situation as a whole on the Matrix series.*)

It is necessary to make a significant remark. These formulas are:

$s_2 = s_1 \times (n-2)$
$b_2 = (b_1 \times n) - b_1 + 2s_1$

show us how much is left on the Matrix series of singles and couples who have remained untouched piercing action. But the actions of piercing, there is such an action:

number of puncturing $\times 1$

which does not change anything, and we agreed to such piercing are not taken into account. But this formula does not know ", and subtracts. And to be true then it deducts one unit, or a couple or alone for eternal storage Mega Matrix. And like cheating, is not reflected in the subsequent Matrix series, as the counting of the first internal step of the Matrix series begins with a number of piercing! And this formula counts on the Matrix series. The same amount, which is located on the first Matrix series of internal steps from 0 to the number of perforation (internal to the first step, Matrix series), can not be taken into account.

7.About passage. Prediction of possible developments.

Passage - the quantity (Number of secondary transmission), which was between steps perforation, resulting in separation of the total set of remaining pairs on a common set of steps piercing.

Simulate the situation with MegaMatrix number on which the set of prime numbers, including primes, twins. Prime numbers is an infinite set.

Model number 1.

Twin primes is a finite set or an empty set. Recently, however, refuted the presence of an existing set of primes, twins.

So, what would be the value of transmission (ie limit of transmission) (X_n), with a step puncturing n?

Finite quantity, divided by infinity (an infinite number of steps, pricking) is 0.

$$\frac{C}{+\infty} = 0$$

0 - infinitesimal, limit of zero.

When we write that:

$$\frac{C}{+\infty} = 0$$

something is done to reduce. It is necessary to understand what we mean ratio:

$$\frac{C}{y_n} = 0$$

$Y_n -$ a sequence with a limit of plus infinity .

What is the value of the passage, at a step puncturing $n + 1$?

$$0 \times \frac{n+1}{n} = 0 \qquad 0 \times C = 0$$

And so on indefinitely.

Here we must make a substantial refinement. As we know:

$$0 \times \infty = \text{ Uncertainty } .$$

It turns out that there is any possible developments.

So would have been if it had not known that a particular value of the transmission and all quantities of passage, not copied to another calculation:

$$X_n \times \frac{n+1}{n} = \frac{Q_{r_n}}{U_{s_{n+1}}} = 0$$

Q_{r_n} –the set of pairs. We have here a finite set $|C|$.

$U_{s_{n+1}}$ –the set of steps, pricking at $n+1$. This is an infinite set.

$$\frac{Q_{r_n}}{U_{s_n}} = 0 \neq \text{ Uncertainty}$$

And so, in our case, we have:

$$0 \times \infty = 0.$$

Firstly, this limit can not be greater than C, and a second, more:

$$\frac{C}{+\infty}$$

Model number 2.

Twin primes is an infinite set. So, what is the value of the passage (limit of transmission), at a step puncturing n?

Plus an infinite value, divided by the plus-infinity, it is uncertainty.

$$\frac{+\infty}{+\infty} = \text{uncertainty}$$

What is the value of the passage, at a step puncturing $n+1$?

$$X_n \times \frac{n+1}{n} = X_{n+1}$$

And so it is infinitely more:

$$X_n ... X_{n+1} ... X_{n+2} ... X_{n+\infty}$$

What are possible limit of the passage? Again we are faced with uncertainty, which can be called "no certainty."

The only thing you can say is that if the limit is not 0, then we may conclude that an infinite set of primes, twins!

To prove an infinite number of primes, twins, the most ideal would be a limit of plus infinity, since $|C|$, this limit is excluded!

Conclusion: We see two outcome of events. Now we need to look at the behavior of X. What it would seek? To what limit?

This complex structure can and simplified. Initially, we have an infinite number of pairs. In the process of pricking and puncturing step increase, we have two possibilities completion of such action. If the set is not punctured pairs is finite, then:

$\lim_{n\to\infty} \mathrm{X}_n = 0 \lim_{n\to\infty} \mathrm{Y}_n = 0$

At one point, the Matrix series, which do not start with 0 and with the prime piercing disappear twin primes, and then the limit of X_n has to be equal to 0. If the set is not punctured pairs is infinite, then:

$\lim_{n\to\infty} \mathrm{X}_n = \infty \lim_{n\to\infty} \mathrm{Y}_n = 0$

When:

$\lim_{n\to\infty} \mathrm{X}_n = \infty \lim_{n\to\infty} \mathrm{Y}_n = 0$

pairs (twin primes) can not be finite.

8.About passage. The proof of infinity of the set of conservation.

Investigate the behavior of X!

Note the number of secondary transmission (X) by one step. Then we have a number of passages:

$$\mathrm{X}_0, X_1, X_2....X_\infty.$$

For example, we have X_{53}.

And if you come in the course of the following number of piercing, and if it did not "kill"a single pair, then the passage would be Z_{54},but because in the course of puncturing a pair of pierced, then:

$$\mathrm{X}_{54} = Z_{54} - Y_{54}$$

Now look at the limits of the sequences X and Y.

How do we get X? Consider one more time. At first, we know the length of the internal steps of the Matrix series. It is equal to:

For example, the Matrix series 3-11.

On the Matrix series 3-11, the numbers involved 3,5,7,11 involved in piercing, and we therefore multiply these numbers:

$$3 \times 5 \times 7 \times 11 = 1155$$

and then double the result:

$1155 \times 2 = 2310$

The last number on puncturing the Matrix series 3-11, is 11. And its full length step equal to $11 \times 2 = 22$.

From this, the Matrix series of 3-11, we have:

2310 : 1922 = 105 total steps, pricking, on a single internal step, the Matrix series 3-11. Number of steps in the internal step of the Matrix series 3-11 (R_s).

According to the formula specified in Section 6, we calculate the number of pairs in one internal step of the Matrix series 3-11. It will be 135. The number of pairs in the internal step of the Matrix series 3-11 (S)

Now we look at the ratio $\frac{S}{R_s}$:

$\frac{135}{105} = 1,2857$

That's how we calculated the value of passing on the Matrix series 3.11!

To move to a new member of the sequence X, we have a way to shorten the residence.

Formed as X, we can write this way:

$$X_1 = X_0 \times \frac{N_2}{N_1} - Y_1$$
$$X_2 = X_1 \times \frac{N_3}{N_2} - Y_2$$
$$X_3 = X_2 \times \frac{N_4}{N_3} - Y_3$$

And so it is infinitely more!

$$Y_1 = \frac{2}{N_2} \times (X_0 \times \frac{N_2}{N_1})$$
$$Y_2 = \frac{2}{N_3} \times (X_1 \times \frac{N_3}{N_2})$$
$$Y_3 = \frac{2}{N_4} \times (X_2 \times \frac{N_4}{N_3})$$

And so it is infinitely more!

N - the prime numbers in order of location in the natural series of numbers.

We consider our sequence, starting with $N_1 = 7$

And then, respectively, $X_0 = 1$

Here's how to increase the value went up to the passage of the Matrix series 3-53:

$1 \rightarrow 1,28 \rightarrow 1,28 \rightarrow 1,48 \rightarrow 1,48 \rightarrow 1,61 \rightarrow 1,92 \rightarrow 1,92 \rightarrow 2,17 \rightarrow 2,29 \rightarrow 2,29 \rightarrow 2,39 \rightarrow 2,60 \rightarrow ...$

Where we see equality in passing, that where there are twin primes. We have also just set of primes, and the difference between them is constantly increasing. But here is whether this is actually with the magnitude of the passage? What is the limit of the X and Y?

We need to consider sequences X and Y. We will show them, and the sequence of Y, a bit simplified:

$$X_i = X_{i-1} \times \frac{N_{i+1}}{N_i} - Y_i$$

$\mathbf{Y}_i = \frac{2}{N_i} \times X_{i-1}, i \in N$
And so what we have:
$\mathbf{X}_i = X_{i-1} \times \frac{N_{i+1}}{N_i} - Y_i = X_{i-1} \times \frac{N_{i+1}}{N_i} - \frac{2}{N_i} \times X_{i-1} = \frac{N_{i+1}-2}{N_i} \times X_{i-1}$
From this we see:
$\mathbf{X}_i = \frac{N_{i+1}-2}{N_i} \times X_{i-1} \Leftrightarrow \frac{N_i}{N_{i+1}-2} \times X_i = X_{i-1}$
thus:
$\mathbf{Y}_i = \frac{2}{N_i} \times X_{i-1} = \frac{2}{N_i} \times \frac{N_i}{N_{i+1}-2} \times X_i = \frac{2}{N_{i+1}-2} \times X_i$
Original sequence can be written differently:
$\mathbf{X}_i = \frac{N_{i+1}-2}{N_i} \times X_{i-1}$
$\mathbf{Y}_i = \frac{2}{N_{i+1}-2} \times X_i$
i$\in N$
N$_i-$a sequence of prime numbers, starting with the first issue of.

Expanding the expression for $\mathbf{X}_i$,we get:
$\mathbf{X}_i = \frac{N_{i+1}-2}{N_i} \times X_{i-1} = \frac{N_{i+1}-2}{N_i} \times \frac{N_i-2}{N_{i-1}} \times X_{i-2} = \frac{N_{i+1}-2}{N_i} \times \frac{N_i-2}{N_{i-1}} \times \frac{N_{i-1}-2}{N_{i-2}} \times X_{i-3} = ... = \frac{X_0(N_{i+1}-2)}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j}$
Follow below:
$\mathbf{Y}_i = \frac{2}{N_{i+1}-2} \times X_i = ... = \frac{2}{N_{i+1}-2} \times \frac{X_0 \times (N_{i+1}-2)}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j} = \frac{2X_0}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j}$

We now estimate $\mathbf{Y}_i$from below, taking into account$N_j \leq N_{j+1} - 2$:
$\mathbf{Y}_i = \frac{2X_0}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j} > \frac{2X_0}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_{j+1}-2} = \frac{2X_0}{N_1} \times \frac{N_2-2}{N_3-2} \times \frac{N_3-2}{N_4-2} ... \frac{N_{i-1}-2}{N_i-2} \times \frac{N_i-2}{N_{i+1}-2} = \frac{2X_0}{N_1} \times \frac{N_2-2}{N_{i+1}-2}$
Now we can see:
$\mathbf{Y}_i > \frac{2X_0}{N_1} \times \frac{N_2-2}{N_{i+1}-2}$

Now we estimate $\mathbf{Y}_i$from above, taking into account that$ln(1-x) < -x, x \in (0,1)$:
$\mathbf{Y}_i = \frac{2X_0}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j} = \frac{2X_0}{n_1} e^{ln \prod_{j=2}^{i} \frac{N_j-2}{N_j}} = \frac{2X_0}{N_1} e^{\sum_{j=2}^{i} ln(1-\frac{2}{N_j})} < \frac{2X_0}{N_1} e^{-2 \sum_{j=2}^{i} \frac{1}{N_j}}$

Thus:

$\frac{2X_0}{N_1} \times \frac{N_2-2}{N_{i+1}-2} < \mathbf{Y}_i < \frac{2X_0}{N_1} e^{-2 \sum_{j=2}^{i} \frac{1}{N_j}}$
We now turn to the limit, while taking into account the fact that the series $\sum_{j=2}^{i} \frac{1}{N_j}$diverges, then we get:

$\lim_{i \to \infty} \frac{2X_0}{N_1} \times \frac{N_2-2}{N_{i+1}-2} < \lim_{i \to \infty} Y_i < \lim_{i \to \infty} \frac{2X_0}{N_1} e^{-2 \sum_{j=2}^{i} \frac{1}{N_j}} \Leftrightarrow 0 \leq \lim_{i \to \infty} Y_i \leq 0 \Leftrightarrow \lim_{i \to \infty} Y_i = 0$

This brings me to the proof that $\lim\limits_{i\to\infty} Y_i = 0$.

We continue on. Here we have $Y_i = \frac{2}{N_{i+1}-2} \times X_i$.From this we see:

$$X_i = \frac{N_{i+1}-2}{2} \times Y_i = X_0 \times \frac{N_{i+1}-2}{N_1} \prod_{j=2}^{i} \frac{N_j-2}{N_j} = X_0 \times \frac{N_{i+1}-2}{N_1} e^{ln \prod\limits_{j=2}^{i} \frac{N_j-2}{N_j}} =$$

$$X_0 \times \frac{N_{i+1}-2}{N_1} e^{\sum\limits_{j=2}^{i} ln(1-\frac{2}{N_j})} > X_0 \times \frac{N_{i+1}-2}{N_1} e^{-4\sum\limits_{j=2}^{i} \frac{1}{N_j}}$$

We turn now to the limit:

$$\lim_{i\to\infty} X_i > \lim_{i\to\infty} X_0 \times \frac{N_{i+1}-2}{N_1} e^{-4\sum\limits_{j=2}^{i} \frac{1}{N_j}}$$

Now we define a limit on the right:

$$\lim_{i\to\infty} X_0 \frac{N_{i+1}-2}{N_1} e^{-4\sum\limits_{j=2}^{i} \frac{1}{N_j}} = \frac{X_0}{N_1} \lim_{i\to\infty} \frac{N_{i+1}-2}{e^a}$$

a= $4\sum\limits_{j=2}^{i} \frac{1}{N_j}$

When $\sum\limits_{k=1}^{n} \frac{1}{p_k} \sim lnlnn$And taking into account $N_1 = p_4$:

$$\frac{X_0}{N_1 e^{-4(\frac{1}{2}+\frac{1}{3}+\frac{1}{5})}} \lim_{i\to\infty} \frac{N_{i+1}-2}{ln^4 i}$$

When $\lim\limits_{i\to\infty} \frac{(i+1)-2}{ln^4 i} = \infty$then the limit $\lim\limits_{i\to\infty} \frac{N_{i+1}-2}{ln^4 i} = \infty$as$N_{i+1} > i+1$

And as soon as X_0may affect the character of this limit, we have:

$$\lim_{i\to\infty} X_0 \times \frac{N_{i+1}-2}{N_1} e^{-4\sum\limits_{j=2}^{i} \frac{1}{N_j}} = sign(X_0) \times \infty$$

Here we see that the limit of $Y_i$is always equal to 0, and the limit of$X_i$is equal to the$sign(X_0) \times \infty$given that$sign(0) \times \infty = 0$.

The value of the passage (save) tends to infinite value, and the value reduces the value of the passage to 0.

And if, to admit that the Matrix series of 3-N will be delayed past the real primes, twins, and only then the rest of an infinite set of matrices will be given a number of primes 0-twins, then, if we set will be finite. And we are faced with a confusing paradox that and probably do not understand what shape it a paradox, but in fact it is aporia.

If, from this point to record the value of passage, then, it still would lead us into infinity, but in reality, there will not be any one of the numbers-twins! Is the value of going to infinity, can have a zero limit?

9. Conclusions made from the definition of transmission.

We return to the $X = Z - Y$

1.Ishodya from the definition of a limit value of the passage, at a value > 0, the set of pairs is infinite.

2.Ishodya from the definition of a limit value of the passage, at a value $= 0$, the set of pairs can be assured because:
$\frac{C}{+\infty} = 0$

3. An increase in stride length piercing, we automatically increase the amount of passage. If the value of transmission is increased only by increasing stride length perforation, then:

$$\mathbf{Z}_i = \mathrm{a} \times \frac{N_{i+1}}{N_1} \qquad \lim_{i \to \infty} Z_i = \infty$$

4. But we, the value of Y is constantly adjusts the Z, and from this:

$$X \neq Z \qquad X = Z - Y$$

5. But, if $X = Z - Y$ written in terms of quantity limits, then:

$$+\infty = +\infty - 0$$

We see that X and Z tend to the limit, to the mix at infinity, and this common limit is opposite to the limit 0.

6. Based on the findings 1 - 5, we can conclude that a finite set and the empty set of primes, twins excluded. From this, it can only be an infinite number of equal power $\aleph_0$!

This complex structure can and simplified. Initially, we have an infinite number of pairs. In the process of pricking and puncturing step increase, we have two possibilities completion of such action. If the set is not punctured pairs is finite, then:
$\lim_{n \to \infty} \mathrm{X}_n = 0 \ \lim_{n \to \infty} \mathrm{Y}_n = 0$

At one point, the Matrix series, which do not start with 0 and with the prime piercing disappear twin primes, and then the limit of X_n has to be equal to 0. If the set is not punctured pairs is infinite, then:
$\lim_{n \to \infty} \mathrm{X}_n = \infty \ \lim_{n \to \infty} \mathrm{Y}_n = 0$

When:

$\lim_{n\to\infty} X_n = \infty \lim_{n\to\infty} Y_n = 0$
pairs (twin primes) can not be finite.

10. Reciprocal treatment is not simple even numbers.

When the mutual circulation of two or more odd prime numbers, distances between points on the natural circulation numbers defines a small number of prime, involved in a reciprocal treatment.

The distances between calls, is:

$$2 \times 1, 2 \times 2, \to 2 \times n \ (2 \ \times (1 \longrightarrow n))$$

n - the smallest prime number, participating in treatment.

Since we have a sieve of Eratosthenes, the smallest odd prime number is 3, which is involved in piercing, and mutual appeal to other prime numbers, then we see variants of the distances between the points of perforation (relative treatment of primes):

2 - where there are no odd numbers. Example 19-21.

4 - where it is possible to accommodate prime-alone. Example 21-25.

6 - where it is possible to accommodate the twin primes. Example 15-21.

Whatever we do not have a finite set of primes, we are in their mutual address, we will watch all these gaps. And what's more, we can install and set each interval.

The question is not the case, but that an infinite set of primes involved in the mutual treatment, can disappear in a distance of 6 units. Based on the rules of reciprocal treatment odd primes, we know that the distance defines the smallest. We want to know how is it possible appearance of a mysterious odd-number 2?!

Intervals of 4 units do not disappear, according to the proof of Euclid. But the impossibility of extinction distance in 2 units, we prove the Matrix series 2,3,5 with an infinite set of such distances, which are already less can not be.

If, for a small number was, for example, 7, then we would be worried about the set of such intervals as the 6,8,10,12,14.

And here, we should expand the question of the set of primes, twins, to the question of whether the mutual circulation of prime numbers, the lowest by any prime number intervals in a reciprocal treatment to move to other, more modest level. For example, with the smallest number 7, periods of 2,4,6,8,10,12,14 go to 2,4,8,12?

If we accept the idea of a finite interval of 6 units, then we accept the idea that the basis of reciprocal treatment of primes, we arrive at the inclusion of all infinitely simple odd numbers, go to the mutual treatment of what is mysterious is not even number 2. And then the gaps will be at 2 and 4 units.

It turns out that we will gradually incorporate into circulation is a mystical number. That's how we have going with the gradual inclusion in the turnover of 1. On occasion piercing on a sieve of Eratosthenes and the numbers are divisible by 1, then eventually we will be periods of only 2 units. This does not violate the laws of mutual treatment of simple odd numbers.

The proof of infinity of primes may well be that we have found quickly, because a prime number is involved in mathematical operations as a separate independent party transactions. Primes twins as a unit not involved in mathematical operations, and here every prime of the two regardless of the number of located. Maybe that's why we had trouble finding proof of the set of primes, twins.

Conclusions:

When considering the set of primes, twins from a position of mutual circulation of prime numbers, it begs the view that we think all this time since the days of Euclid's trying to find proof for the axioms. Is not it may be an axiom:

transition in the mutual treatment of a small number of the smaller number, perhaps only when the new numbers to the mutual appeal. An odd number 2 does not, and therefore the mutual appeal can not go to that small number!

11. The formation of pairs of addresses (and not just couples!) In the matrix series.

The fact that any mutual circulation of a finite set of primes, we have gaps in units 2,4,6 do not disappear, is indisputable. We are concerned about the mutual appeal of an infinite set of primes.

Now let us consider the set of pairs in the Matrix series, from a position of reciprocal treatment is not simple even numbers, and addresses the formation of pairs (and not just couples!) On the Matrix series.

Here's how it works:

The small number is 3.

Single treatment $3 - X - X - 3$ be written as $3 - 3 + 2 - 3 + 4 - 3 + 6$

3 and 3+6 is the number divisible by 3, and 3+2,3+4 numbers are not divisible by 3. And with a couple of numbers not divisible by 3. So, what would the number is not divisible by this pair, it must be at point 3, and refers to the first number 3+2. It is relatively divisible by 3.

(3+2-3) -3+4-3+6-3

Here we see another option for 3, is 3+2. That is, if for example, the point of perforation is at this point, then, piercing does not affect the next couple.

Consider further, with respect to 5.

Turnover number 5 can be positioned at various points. Therefore, the possible options for the conservation of pairs, defined as follows:

Full circle the number 5 with an odd number is 10. And 10 we put on the second pair:

- 5+2 - 5+4 - (5+6 - 3) - 5+8 - 5+10 -3

That's all the options that do not fall between the numbers 3, it's options for couples. 5+2,5+4,5+6. 3 options. A variants with 5+8,5+10 - are the cases of pairs of piercing!

Here's how things are going with 7:

7+2 - 7+4 - 7+6 - 7+8 - (7+10 - 3) - 7+12 - 7+14-03

Here are 5 options for the conservation of pairs

7+2,7+4,7+6,7+8,7+10.

And so on.

Now let's see how things are going, if the smallest number is 5, then to determine, for example, the distances between the turnover of 10 units, we proceed as follows:

(5+2-5) -5+4-5+6-5+8-5+10-5

One option 5+2.

When handling 7:

7+2, 7+4 - (7+6-5) -7+8-7+10-7+12-7+14-5

Here we have 3 option 7+2,7+4,7+6.

And so on, for address requests to the 10 units.

Now let's see how to define the Address in 8 units, with 5 as the small number in circulation. Been here for 4 option 7+2,7+4,7+6,7+8.

This applies to all numbers, and for each option, the distance of mutual treatment, we can construct a strictly limited set of addresses. It tells us about the impossibility of extinction, nor any distance on the Matrix series for the inclusion of any set of numbers that is not less than small.

In this case, based on the above stated, the set of pairs stored in the internal step of the new Matrix series can also be defined as follows:

(5-2) $\times(7-2)\times(11-2)\times(13-2)...(n-2)$

3 $\times 5 \times 7 \times 9 \times 11...(n-2)$

We see if the inclusion in the treatment of a prime number 5, then those 3 options "past mean that there are 3 options, when reverse-piercing of a prime number 5, the point piercing does not reach the front of the nearest not deleted pairs in 3 different distances . If members of the pair designated as 0,0+2, then these addresses

2+(0,0+2), 4+(0,0+2), 6+(0,0+2)

Written as 5+2+(0,0+2), 5+ 4+(0,0+2), 5+ 6 +(0,0+2)

When addressing a prime, 7 is:

2 +(0,0+2), 4+(0,0+2), 6+(0,0+2), 8+(0,0+2), 10+ (0,0+2)

Recorded as 7+2 +(0,0+2), 7+4+(0,0+2), 7+6+(0,0+2), 7+8+(0,0+2), 7+10+ (0,0+2)

Here's how addresses are pairs of the inner step of the Matrix series 2,3,5,7:

1. 5+6+(0,0+2)

7+4+(0,0+2)

For 11-13

2. 5+2+(0,0+2)

7+10+(0,0+2)
For 17-19
3. 5+4+(0,0+2)
7+8+(0,0+2)
For 29-31
4. 5+6+(0,0+2)
7+6+(0,0+2)
For 41-43
5. 5+4+(0,0+2)
7+10+(0,0+2)
For 59-61
6. 5+6+(0,0+2)
7+8+(0,0+2)
For 71-73
7. 5+6+(0,0+2)
7+10+(0,0+2)
For 101-103
8. 5+2+(0,0+2)
7+2+(0,0+2)
For 107-109
9. 5+2+(0,0+2)
7+4+(0,0+2)
For 137-139
10. 5+4+(0,0+2)
7+2+(0,0+2)
For 149-151
11. 5+2+(0,0+2)
7+6+(0,0+2)
For 167-169
12. 5+4+(0,0+2)
7+4+(0,0+2)
For 179-181
13. 5+6+(0,0+2)
7+2+(0,0+2)
For 191-193
14. 5+2+(0,0+2)
7+8+(0,0+2)
For 197-199
15. 5+4+(0,0+2)
7+6+(0,0+2)
For 209-211

Now we see that each couple gets their own special "registration"on the domestic stage of the Matrix series. This process does not change under the new inclusion of any set of primes.

Based on these rules, we can write all the addresses and punctured pairs. Just now while writing the first address, for example on the Matrix series2, 3 .. 23, the first entry in the address form of two options:

23+0 и 23+(0+2)

And not out 21 options. $(23+2, 23+4, 23+6, \ldots 23+38)$

In the rest of the address records punctured couples are using the old set of options. So we can write:

23+(0+2),19+4,17+8,13+6,11+4,7+2,3+2

And to find a pair that will be punctured. From this set of pairs of punctured on the Matrix series, defined as follows:

$2 \times (n_1 - 2) \times (n_2 - 2) ... \times (n_{n-1} - 2)$

Conclusions:

1 address for an internal step of the Matrix series. Each internal step, any number of Matrix 2,3, ... N addresses will not be repeated.

One pair may have several different addresses, but each address on a number of different matrices. Address translation from the first Matrix series to the last, ends with 0 option.

Example: 11+0,7+4,5+6,3+2.

And then the couple have already disappeared from the Matrix series. If a zero address to n^2, then it will be twin primes. If, after the n^2, then, just a couple.

Expanded addresses in order of their location on the inner step, Matrix series, only 1 a single procedure, since each address is assigned to the number (two numbers) of positive integers. Number of positive integers have only 1 procedure location.

Thus, both located at the address MegaMatrix series. Of all the Mega-addresses, we can only select 1 order of arrangement.

Address any possible, based on the capabilities on which they are drawn. All these addresses are bound to have on the Matrix series.

12. On the expansion and the asymptotic equality.

Based on the principle of education Matrix series, we have established how you can define a set of pairs and as singles on the newly formed Matrix series:

$s_2 = s_1 \times (n_2 - 2)$

$b_2 = (b_1 \times n_2) - b_1 + 2s_1$

The latter formula is possible to simplify:

$b_2 = b_1 \times (n_2 - 1) + 2s_1$

Set of pairs and singles together form a set of conditional primes in the Matrix series. In this set also includes a set of primes, which is located to the n^2 numbers next piercing.

We denote this set as P.

Based on the above formulas, we can easily define a set of simple on the new Matrix series:

$P_2 = P_1 \times (n_2 - 1)$

Previously, we determined the amount of passage for couples:

$X_i = X_{i-1} \times \frac{N_{i+1}}{N_i} - Y_i$

$Y_i = \frac{2}{N_i} \times X_{i-1}, i \in N$

And they came to proving that:

Limit Y_i is always equal to 0, and the limit of X_i is equal to the $sign(X_0) \times \infty$ given that $sign(0) \times \infty = 0$.

The value of the passage of steam has the limit plus infinity:

$\lim\limits_{i \to \infty} X_{pairs} = \infty$

Based on the fact that many individuals and even quasi-simple, is ahead of many couples to any Matrix series, and the value of the passage defined with respect to the same set - on the steps of puncturing the Matrix series, and then:

$\lim\limits_{i \to \infty} X$ single $= \infty$

$\lim\limits_{i \to \infty} X$ y / prime $= \infty$

A new set of prime numbers in general, single-prime and prime twins, each formed in the Matrix series $n_i^2 - n_{i1}^2$.

If the twin primes are infinite, the emergence of a new set of numbers with the corresponding value passing ($X_{n_i^2 - n_{i+1}^2}$) must necessarily strive for equality of value passing in the Matrix series (X_i). And then the reality:

$\lim\limits_{i \to \infty} \frac{X_{n_i^2 - n_{i+1}^2}}{X_i} = 1$

Which is easily confirmed empirically, and as it did not find the farthest in the natural series of numbers from 0, primes, twins, to them we always find a confirmation:

$\lim\limits_{i \to \infty} \frac{X_{n_i^2 - n_{i+1}^2}}{X_i} = 1$

This is consistent with:

Ca/ln$^2 \times x$

(C = 1,3203236313 ...)

Empirical evidence does not equal the mathematical proof, so here the notion of proof is divided into two. Empirical evidence is proof on a strictly limited segment of natural numbers. Mathematical proof is a proof of all the infinite number of natural numbers. Consideration of empirical research involuntarily inclines to draw an analogy with the asymptotic equation, which has already proved a rigorous mathematical proof:

$\lim\limits_{x \to \infty} \frac{\pi(x)}{\frac{x}{ln\ x}} = 1$

Is there a relationship between two "asymptotic"? And can:

$\lim\limits_{i \to \infty} \frac{X_{n_i^2 - n_{i+1}^2}}{X_i} = 1$

with a certain stage to go to the next limit? K 0?

And for the prime numbers in general can make the asymptotic equality established in 1896:

$\pi(x) \sim \frac{x}{ln\ x}$

which includes in itself that's such a limit:

$$\lim_{x\to\infty} \frac{\pi(x)}{\frac{x}{ln\ x}} = 1$$

And before it was proof than has been found that limit was initially represented by the asymptotic equation, Legendre set of empirical studies:

$$\pi(x) \approx \frac{x}{ln\ x - 1{,}08366}$$

The asymptotic equality, we will return later. Now make a small digression.

When piercing the numbers, if we have the opportunity to make 10 punctures in a segment of positive integers $i - 15i$ where there are 10 singles and 10 pairs, then we see that there is no difference in what is punctured. There is no difference for the total set of numbers is not punctured. We see that as a result there should be 20 conventional primes.

Is it the Matrix series? It turns out that no!

Now we'll talk about expanding the mutual treatment of simple odd numbers! As we have already found variants in the mutual distances circulation determines the small number participating in the mutual use. So, if a small number of 3, then the options of distances between points of mutual circulation is 2,4,6. At a distance of 4 is a loner, in the version 6 - a couple. Assuming the disappearance of variant 6 (ie the twin primes), then we should go the mutual treatment of the mystical is not even number 2. So the distance will be at 2 and 4 units. Is there any difference except for the difference in the variants of the mutual distances treatment?

Defined with the extension. Extending the mutual circulation odd primes, the set of odd numbers, which most can be placed in the same interval of natural series of numbers. Look and define the extension for 1,3,5,7. That is, if these numbers are a small number of mutual circulation of odd numbers.

0 - this is where there is no odd numbers.

X-where there is a loner.

XX-where there are a couple, and so on.

Ratio - the denominator of a set of numbers, and in the numerator, the distance between the beginning and end of treatment all the options range.

Extension for:

A small number of mutual circulation is 1:

1-0-3

$2\ /\ 0 = 0$

A small number of mutual circulation is 3:

2-0-4-8-XX-14

$12\ /\ 3 = 4$

A small number of mutual circulation is 5:

2-0-4-8-XX-XXX-14-22-XXXX-32

$30/10 = 3$

A small number of mutual circulation is 7:

2-0-4-8-XX-XXX-14-22-XXXX-32-XXXXX-XXXXXX-44-58

$56/21 = 2{,}66$

When extending the 2.66 we have a small number is 7, this means that we exclude from the market all the numbers to 7. When we have a small number is 3, then we also excluded from the turnover number (number) to 3, and this number is 1.

Now we take a segment of natural numbers $14 \times 32 \times 58 = 25{,}984$

It increased 4 leaves 3 $\times 32 \times 58 = 5568$ is not punctured are not even integers

.

Extension 3, for 10 $\times 14 \times 58 = 8120$.

Extension 2.66 - 21 $\times 32 \times 14 = 9408$.

And if we allow a mystical odd number 2, with the expansion of 6, then the interval 8 $\times 14 \times 32 = 3584$.

Extension of the 3 leaves 1120.

Expansion of the 4 leaves 1024.

Expansion of the 6 leaves 448.

As you can see, the difference is significant.

In this case, we can conclude: one interval of natural numbers, different extensions, raised in similar conditions, can not form an equal set of numbers is not punctured. If we have gone the twin primes, then in turn enter the mystical is not even number 2, and then the extension should be:

A small number of mutual circulation is 2

2-0-4-X-8

$6/1 = 6$

Even allowing for the possibility of the existence of this mystical odd number 2, then we see that the extension is different than the number 3! And then, on the Matrix series, where a number of up to n^2, the expansion will be equal to 4 and up - is 6. And so on. In this case, 6 should be for 4.

Now, take a look and compare, different whether and how the expansion in 4 and 6 units on the Matrix series.

1. Matrix series

2. Relatively simple set of primes in the Matrix series (single / couple)!

3. Interval of natural numbers, which may take the set of all punctured numbers on the Matrix series with an extension 4 provided freely, and most are grouped in one place is not punctured numbers. Initially, the set of pairs of an equal set of singles, that would be a 1:1 ratio, and then one pair occupy a single interval of natural numbers into 10 units, and all such relations are determined, respectively. So many single parents, who did not have enough steam, they appear as one single period is a natural number of 4 units.

4. Interval of natural numbers, which may take the set of all punctured numbers on the Matrix series with the expansion of 6, provided freely, and most are grouped in one place is not punctured numbers. Set as specified in paragraph 2, multiplied by 4.

5. Difference intervals.

6. Value intervals (J) on adjacent matrix number ($\frac{5_{i+1}}{5_i}$).

(Same conditions - this layout is not punctured numbers, after piercing the same set of numbers piercing, at a particular interval of natural numbers. For example, after piercing the numbers 3,5,7,11 on Matrix series 2, 3,5,7,11 we see then punctured and the location is not punctured numbers, which can be set only after a piercing. Otherwise, in another set we can not accommodate. If we find one segment of one set, then going to the mutual treatment of the mystical number 2, we exclude intervals of 6 units, and accordingly reduces the set of primes in this interval. In order that would be equal to the previous set, we then need to capture a larger segment of natural numbers.)

1. Matrix series 2, 3
2. 2 (0/1)
3. 6
4. 8
5. 2

1. Matrix series 2, 3,5.
2. 8 (2/3)
3. 26
4. 32
5. 6
6. 3

1. Matrix series 2, 3,5,7.
2. 48 (18/15)
3. 162
4. 192
5. 30
6. 5

1. Matrix series 2, 3,5, -11.
2. 480 (210/135)
3. 1650
4. 1920
5. 270
6. 9

1. Matrix series 2, 3,5, -13.
2. 5760 (2790/1485)
3. 20070
4. 23040
5. 2970
6. 11

1. Matrix series 2, 3,5, -17.
2. 92160 (47610/22275)
3. 324090
4. 368640
5. 44550
6. 15.

1. Matrix series 2, 3,5, -19.
2. 1658880 (901530/378675)
3. 5878170
4. 6635520
5. 757350
6. 17

1. Matrix series 2, 3,5, -23.

2. 35495360 (20591010/7952175)
3. 130077090
4. 145981440
5. 15904350
6. 21
1. Matrix series 2, 3,5, -29.
2. 1021870080 (592452630/214708725)
3. 3658062870
4. 4087480320
5. 429417450
6. 27

As you can see here the value of J has a natural extension:

$J_i = J_{i-1} \times N_i - 2$

We know, N_i has a limit of plus infinity, from which the limit of $N_i - 2$ is the same. From the foregoing it is easy to conclude:

$\lim_{i \to \infty} J_i = \infty$

Now go back to the asymptotic equality.

$\pi(x) \sim \frac{x}{ln\ x}$

No matter how tempting were the results, but already there's theorem (A.A.Buhshtab.str.26), whose essence consists in the fact that when the ratio of the asymptotic Equality:

$\lim_{x \to \infty} \frac{f(x)}{w(x)} = 1$

limit does not change if the difference:

$F(x)$ and $w(x)$ increases with x, but the growth of | f (x) - w (x) | grows slower than the growth of | f (x) | and | w (x) |. We also happens that way. Maybe this is one of the reasons for inability to detect the difference between the set of primes with primes, twins, and without them. And also the fact that the ratio of simple to simple lone pairs has risen steadily and is in the 0 limit. This is a relation, however, as it were, a set of pairs of lone did not fall, the very same set of pairs is constant growth. rather than fall.

Now, we have established that the set of prime numbers on the segments of the natural series of numbers, different for different extensions. However, this does not affect the limit of asymptotic equality.

In order that would have disappeared, the number of simple twins, this should decrease the set of primes in new segments of the natural numbers

[x, x + a]

And for this, additional set of piercing. Pierce themselves as couples and singles come in a clearly defined relationship, which is based on the order of piercing new couples and new singles.

Set of piercing, behind a set of pairs, and this growth is within plus infinity. That's why, eventually accumulating infinite set of pairs that can not be punctured, and, accordingly, this set is the set of primes, twins.

13. General conclusions.

In this paper, we consider the question of the infinity of primes in sequence:
[n, n +2]

In mathematics, this is not the only problem of this kind. So? not resolved the issue with the numbers Sophie Germain:
[n, 2n + 1]

And with many other prime locations in relation to each other.

In essence, these problems with simple numbers you can dial an infinite set. We have from the Matrix series of 2,3 - constantly emerging new types of distances between prime numbers and a lot of them are inclined to rise to infinity!

Can you find what the overall approach to the infinity of an infinite number of locations to each other primes?

If, to apply the method to the passage, as given in this paper, it looks like he is versatile.

Consider whether this is so?

We have a matrix number of 2,3-N. On it, in the process of piercing, formed the new distance between the non-punctured numbers. Distance, which no on the previous matrix series:
[n, n + a]

We know that all the pierced and punctured the number located in the first half of the Matrix series of internal steps, the Matrix series, have their mirrored copies, located in the second half of internal steps. From this, a number of new distances can not be |1|, and at least |2|. Assume that this minimum. And so, we have not pierced the number, the distance between them is:
[n, n + a]

Such variants |2| in the Matrix series of 2,3-N.

We define these distances as X_{153}, the set $X_{153/1}$

Further, during a new piercing prime n_{+1}, we have formed the Matrix series of $2, 3..N_{+1}$. It was to pierce the $X_{153/1\times(n_{+1})}$ pairs X_{153}. During the piercing, given puncturing rule numbers $\frac{1}{n_{+1}}$ and the fact that a pair of X_{135} consists of two numbers, we have slashed the pairs :
$\frac{2}{n_{+1}}$

It remains $\frac{(n_{+1})-2}{n_{+1}}$

On the domestic stage of the Matrix series of 2,3 .. N_{+1}, were $|R_{+1}|$ the set of steps piercing. The ratio of the set of pairs $X_{135_{+1}}$ on the Matrix series of $2, 3..N_{+1}$ to set $|R_{+1}|$, we define the quantity $(X_{r_{+1}})$ the passage of these pairs .

In further puncturing, and the construction of matrices row value (X_{r_n}) is amended as follows:
$X_{r_n} = \frac{X_{135_1}\times(n-2)}{R_1\times(n_{-1})}$

If, for larger steps of piercing is piercing the previous number, then, for larger sets of pairs for the relation, already a number less than 2 units, from the present number of perforation.

The magnitude of the set X_{135} grows faster, as well as for pairs $[x, x+2]$, this growth takes infinitely relation to the limit value of plus infinity.

All these rules are applicable for all $[n, n+a]$. So:

$\lim_{x,a \to \infty} |[n, n+a]| = \infty$

This conclusion is also applicable for proof of an infinite set of all groups of numbers, for any small number of perforation.

If a small number of perforation 13, then, by analogy easily deduce the proof of the infinite value of the passage of the 7 numbers (number of twins, a group of 2 numbers) that indicates an infinite set of numbers.

There is an assumption which says that if you pierce all the pairs in order of their location, then so pierce everything. In principle, this assumption does not contradict logic. But we have this assumption contradicts the mathematical proof of the infinite limit of the passage that tells us about the infinite set of pairs that can not pierce. At variance with the proof assumptions, accepted the proof!

Describing the problem of Hilbert, A. Bolibrukh considering infinite sets the example of hotel with an infinite number of rooms, it has at installation of new tenants, the former did not disappear. Similarly, with the assumption of a piercing, then set that does not pierce, it will not go away!

14. Literature.

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