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"New search for truths – only this is the only science"

Dm.I. Mendeleev

Disclosure Euler number (Modern understanding of "limits" and how to "prove" in mathematics) (Abstract)

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In fact, in terms $\lim_{x\to\infty}\left(1+\frac{1}{x}\right)^x = e$ in question about this: trying to convince that only only when $x = \infty$, then the degree (or log) expression $\left(1+\frac{1}{x}\right)^x = e$. Otherwise, this is not equality, but equality is always some y, close to e. Since all cases only a "nasty", since at the prevailing opinion even never becomes $x = \infty$, but merely seeks endlessly thereto insofar this equality in the strict mathematical sense, be problematic, i.e. can only be established as an approximate: $\lim_{x\to\infty}\left(1+\frac{1}{x}\right)^x \approx e$. From the point of view presented here are more mixed, and the argument that because a large increase in the value of x curve that describes the expression $\left(1+\frac{1}{x}\right)^x = y$ in the "pursuit» x approaches infinity, it is similar to the line in its an effort in general to the "level" of "number» e and indistinguishable "by eye" on the real line, which is the level of "the number» e, and the value of y becomes awfully close to stealth quantitative difference value to the value of e, which no one has ever laid eyes saw and she knew her only speculative and about, so far is believed that the difference between a curve and a straight line can be neglected and thus, it is believed that the degree of expression $\left(1+\frac{1}{x}\right)^x = y$ «achieved» unattainable in nature «limit» equal «number» e, or in other words, y is set equal to e; and this equality "with a light heart," to make right. This idea is written in modern mathematical symbols as follows:

$$\lim_{x\to\infty}\left(1+\frac{1}{x}\right)^x = e\,.$$

In fact, the «level» of «number» e is not a straight line but a curve, and the «level» is not level in the true sense of the word, and the mean function of the two extreme $\left(1+\frac{1}{x}\right)^x$ and $\left(1+\frac{1}{(y-1)}\right)^y$, and «constant» e is in the action-sional not constant independent and dependent variable e. So in reality, there is not a "transcendental" number e, so to speak, "the unknowable, the thing in itself", "unpredictable", and quite real, but so far undisclosed former function. Its actual discoverer was a skilled mathematician Euler, however, he opened it, and only one-sidedly as a "transcendental number" without seeing it with my own eyes.

What is the solution to the contradictions of the modern "notion-ment" limit, the controversy that is that the pro-consciously establish an indefinite-definite limit of silence and axiomatically accepted the false premise that the $\frac{1}{0} = \infty$?

And that's what:

$$e = \frac{\left(\left(1 + \frac{1}{x}\right)^{x} + \left(1 + \frac{1}{(y-1)}\right)^{y}\right)}{2}$$

where the expression

$$\frac{\left(1 + \frac{1}{x}\right)^{x} + \left(1 + \frac{1}{y-1}\right)^{y}}{2}$$

It is a limit for when e

y = x + 1 and x = y – 1,

and e – Euler function.

There is the case that the mutual relation y in relationship with x y = x + 1 and x = y – 1, we obtain the following equation:

$$\frac{x+1}{x} = \frac{y}{y-1}.$$

However, the extent (logarithms) on both sides of the equation are the opposite:

$\left(1 + \frac{1}{x}\right)^{x} = f(x)$; $\left(\frac{y}{y-1}\right)^{y} = f(y)$, where y = x + 1 and x = y – 1

In general terms, the function e, function of x and y, can be written as:

$$e = f(x, y) = \frac{(f(y) + f(x))}{2}.$$

"The equation» $\lim_{x\to\infty}\left(1 + \frac{1}{x}\right)^{x} = e$ not true, because in reality is always more e $\left(1 + \frac{1}{x}\right)^{x}$, especially as US-proviso that x = ∞. Indeed, what we have at x = ∞?

"Walking" textbooks modestly keep quiet about this, but the source of – [3, paragraphs 83 and 84; 4, pp. 98-100] "outputs" and predicts a race-in this regard as follows: $\frac{1}{\infty} = 0$. Consequently, for $x = \infty$ exponential expression $\left(1+\frac{1}{x}\right)^{x}$ becomes $\left(1+\frac{1}{\infty}\right)^{\infty} = (1+0)^{\infty} = 1^{\infty} = 1$ instead of e, whereas Indeed $\infty = \frac{1}{\left\{1-\left(\frac{(x-1)}{x}\right)\right\}}$ in the strict mathematical sense only when $x = \infty$ and where expression with $\left\{1-\left(\frac{(x-1)}{x}\right)\right\}$ derestricted that it - not calculated the finite difference, and therefore, further proving all the "second remarkable limit", despite its slimness, to nothing. Nevertheless, even if we agree with the ban to consider x as an infinite, that is without end developable process, changing the internal variable, and even despite the fact that in reality $\frac{1}{\infty} \neq 0$ under any conditions - a $= \left\{1-\left(\frac{(x-1)}{x}\right)\right\}$, and even then only if $x = \infty$, where expression with $\left\{1-\left(\frac{(x-1)}{x}\right)\right\}$ remove the restriction that it is - not calculated final the difference - the expression $\left(1+\frac{1}{\infty}\right)^{\infty}$ will always be less than e because we are talking here about the asymptotic relation between the $\left(1+\frac{1}{x}\right)^{x}$ and e, on the one hand, and $\left(1+\frac{1}{x}\right)^{x+1}$, and e, on the other. Otherwise you'll have to admit that the asymptotic ratio - the ratio is fictional, whereas in reality it is - firmly established fact underlies all our knowledge as a prerequisite. And only $e = \frac{\left(1+\frac{1}{x}\right)^{x}+\left(\frac{y}{y-1}\right)^{y}}{2}$, , where e - the dependent variable, and not a "number", and where the expression $\frac{\left(1+\frac{1}{x}\right)^{x}+\left(\frac{y}{y-1}\right)^{y}}{2}$ is the limit values of the dependent variable e.

This function e is the average of two baseline function f (y) and f (x), the mean, the value of each of which are defined in this case the value of interdependent variables x and y (Fig. 1).

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