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USING THE METHOD OF INFINITE RISE TO OBTAIN CERTAIN TYPES OF SOLUTIONS OF THREE-TERM EQUATION TH (ELEMENTARY ASPECT)

ИСПОЛЬЗОВАНИЕ МЕТОДА БЕСКОНЕЧНОГО ПОДЪЕМА ДЛЯ ПОЛУЧЕНИЯ НЕКОТОРЫХ ТИПОВ РЕШЕНИЙ ТРЕХЧЛЕННЫХ УРАВНЕНИЙ (ЭЛЕМЕНТАРНЫЙ АСПЕКТ)

Annotation. *An infinitely lifting method for making certain types of three-term equations, which is completely refuted by the ABC conjecture.*

Key words: *three-term equation, the method of infinite growth, elementary aspect.*

Аннотация. *Использован метод бесконечного подъема для получения некоторых типов решений трехчленных уравнений, которыми полностью опровергается авс-гипотеза.*

Ключевые слова: *трехчленные уравнения, метод, бесконечный подъем, элементарный аспект.*

§ 1

Theorem. "For all three are relatively prime positive integers a, b, c, such that $(a_0 = a^x) + (b_0 = b^y) = (c_0 = c^z)$, for $x > 0$, $y > 0$ are arbitrary real positive numbers, $z = \frac{\ln(a^x + b^y)}{\ln c}$, runs in an infinite number of cases $c_\propto^2 >$ rad$(a_\propto b_\propto \ c_0)$". (1)

Evidence

1.1. We have (1) for positive numbers a_0, b_0, c_0 the equation $a_0 + b_0 = c_0$ (2).

From (2) $(\sqrt{a_0})^2 + (\sqrt{b_0})^2 = (\sqrt{c_0})^2$ (3). Let us assume (3)

1) $m_1 = \sqrt{a_0}$, $n_1 = \sqrt{b_0}$,

$a_1 = m_1^2 - n_1^2 = |a_0 - b_0|$, $b_1 = 2m_1n_1 = 2^{\propto=1} . \left|\sqrt{a_0 b_0}\right|$,

$c_1 = m_1^2 + n_1^2 = (a_0 + b_0) = c_0$, $c_1^2 = c_0^{2^{\propto=1}}$.

2) $m_2 = a_1 = |a_0 - b_0|$, $n_2 = b_1 = 2|\sqrt{a_0 b_0}|$, $a_2 = m_2^2 - n_2^2 =$
$= (a_0 - b_0)^2 - (2\sqrt{a_0 b_0})^2$,

$b_2 = 2m_2n_2 = 2^2 |(a_0 - b_0)| . |\sqrt{a_0 b_0}|$,

$c_2 = m_2^2 + n_2^2 = c_0^2$, $c_2^2 = c_0^{2^{\propto=2}}$.

etc.

....

$\propto$) $b_\propto = (b_\propto : 2^\propto) . 2^\propto$, $c_\propto^2 = c_0^{2^\propto}$, $\propto = 1,2,3,.........,$.

1.2. Statement. "Each equation (2) is the source for in countless cases of "exceptional" triples such that $c_\propto^2 = c_0^{2^\propto} > rad(a_\propto b_\propto c_0)$, starting with some "$\propto$", If only $m_\propto = a_{\propto-1}, n_\propto = b_{\propto-1}$",
and so recursively to infinity.

Evidence

1.2.1. We have the identity: $c^6 - a^6 - b^6 \equiv 3a^2b^2c^2$, if $a^2 + b^2 = c^2; a, b, c - relatively\ prime\ integers$. Definitions of $3a^2b^2c^2 < c^6$ и $c^2 > |ab|$.

1.2.2. Always at some point in the infinite series $2^1, 2^2, 2^3, ..., 2^\propto ....$ There "$\propto$" such, that in " "$b_\propto$" $factor\ 2^\propto > c_0$ (endless lifting method). Hence, $c_{\propto=}^2 c_0^{2^\propto} > rad(a_\propto b_\propto c_0)$.

1.23. Thereby completely proved Theorem (1).

Examples:

1) For x=y=z=1 3+2=5 $(a^{\frac{1}{2}})^2+(b^{\frac{1}{2}})^2=(c^{\frac{1}{2}})^2$. Take $m_1=3^{\frac{1}{2}}$, $n_1=2^{\frac{1}{2}}$. Than,

$a_1=m_1^2-n_1^2=3-2=1,\ b_1=2m_1n_1=\ 2^{\propto=1}.6^{\frac{1}{2}},$

$c_1=m_1^2+n_1^2=5,\ c_1^2=c^{2^{\propto=1}}=5^{2^{\propto=1}}<\mathrm{rad}(2.3.5)=30.$

2) $m_2=a_1=1$, $n_2=b_1=2.6^{\frac{1}{2}}$, $a_2=23,\ b_2=2^{2^{\propto=2}}.6^{\frac{1}{2}}$, $c_2=5^2$, $c_2^2=c^{2^{\propto=2}}=5^4=625<rad\left(23.2.3.5\right)=690.$

3) $m_3=a_2=23,\ n_3=b_2=2^2.6^{\frac{1}{2}}$,

$a_3=433,\ b_3=2^{\propto=3}.23.6^{\frac{1}{2}},\ c_3=5^{2^{\propto=3}}$,

$c_3^2=c^{\propto=3}=5^8=390625>$

$>rad\left(433.2.3.5\right)=12990,\ etc.recurrently\ \ to\,infinity.$

Option x=y=z=2 published. [1]

§ 2

Final statement of the theorem (1): "For all three are relatively prime positive integers a, b, c, such that $a^x+b^y=c^z$, where $x>0, y>0$ – arbitrary real positive numbers, $z=\dfrac{\ln(a^x+b^y)}{\ln c}$, beginning with a "$\propto$", is performed in an infinite number of cases of inequality $c_\propto^2=c^{2^\propto}>rad(a_\propto b_\propto c)$, *if only* $m_\propto=a_{\propto-1}$, $n_\propto=b_{\propto-1}$, *used in equation* $a_\propto^2+b_\propto^2=c_\propto^2$ *by* $a_\propto=a_{\propto-1}^2-b_{\propto-1}^2$, $b_\propto=2a_{\propto-1}b_{\propto-1}$, $c_\propto=a_{\propto-1}^2+b_{\propto-1}^2$ *(endless lifting method)"*. (4)

§§ 1 foregoing, and 2 completely refuted by the ABC conjecture.

Literature

1. Reuven Tint, "On some embodiments", Pythagorean "decisions and other higher order equations" (elementary aspect), 2017. www.ferm-tint.blogspot.co.il