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SOLUTION SYSTEM EQUATIONS: OF NON-MODULAR ELLIPTIC CURVES, H.POINCARE'S, P.FERMAT'S AND A.BEAL'S AS ALTERNATIVE FOR HYPOTHESIS SHIMURA-TANIYAMA AND PROOF OF A.WILES

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INTRODUCTION

It is common problem of theory numbers:

GENERAL THEOREM

It is 9 TYPS of positive whole numbers :

(1)
$$\left| \begin{array}{l} N,\ (v>u),\ (a_0, b_0, c_0), \\ (3F'_a, 3F'_b, 3F'_c),\ (A, B, C), \\ (x, y, z),\ (p, q, r),\ n,\ (X^*, A^*, B^*) \end{array} \right.$$

as equivalent of 9 secondary reduction forms of H.Poincare ,

at which have to natural basis for solutions of the following system equations :

NATURAL BASIS

1, 2, 3, 4, 5, 6, 7, 8, 9,

u=1	v=2

2	9

$$a_0 = v^2 - u^2$$
$$b_0 = 2vu$$
$$c_0 = v^2 + u^2$$

$$[(1+1) = 2] \times 2^n$$
$$[(1+2^3) = 3^2] \times (3^3)^n$$

$$a_* = \sqrt[n]{a_o^{\ 2} \times D_n}$$
$$b_* = \sqrt[n]{b_o^{\ 2} \times D_n}$$
$$c_* = \sqrt[n]{c_o^{\ 2} \times D_n}$$

$$A^x + B^y = C^z$$
$$A^p x + B^q y = C^r z$$

$$a_*^{\ n} + b_*^{\ n} = c_*^{\ n}$$

$$Y^2 = (X^* - A^*) \times X^* \times (X^* + B^*) =$$
$$= a_0^{\ 2}(3D_n) \times b_0^{\ 2}(3D_n) \times c_0^{\ 2}(3D_n) =$$
$$= 3F'_a \times 3F'_b \times 3F'_c$$

$$(a'_1\alpha'_1 + a'_2\,\alpha'_2 + a'_3\alpha'_3)/3F'_a = 1$$
$$(b'_1\beta'_1 + b'_2\beta'_2 + b'_3\beta'_3)/3F'_b = 1$$
$$(c'_1\gamma'_1 + c'_2\gamma'_2 + c'_3\gamma'_3)/3F'_c = 1$$

here triplets numbers
A, B, C contain common multiplier's for system equations

(2)
$$\begin{cases} A^x + B^y = C^z \\ A^p x + B^q y = C^r z \end{cases}$$

and

numbers A^*

in equations for non-modular elliptic curves

(3)
$$Y^2 = (X^* - A^*) \times X^* \times (X^* + B^*)$$

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(4)
$$16 = 4 \times (b_0 = 2vu) = 4 \times (b_0 = 2 \times 2 \times 1)$$

(here v = 2 and u = 1)

over

first condition of secondary reduction forms H.Poincare:

(5)
$$a_1' \alpha_1' + a_2' \alpha_2' + a_3' \alpha_3' = 1$$

in our case it is widened up to three corresponding conditions:

(6)
$$\begin{cases} (a_1' \alpha_1' + a_2' \alpha_2' + a_3' \alpha_3') / 3F'_a = 1 \\ (b_1' \beta_1' + b_2' \beta_2' + b_3' \beta_3') / 3F'_b = 1 \\ (c_1' \gamma_1' + c_2' \gamma_2' + c_3' \gamma_3') / 3F'_c = 1 \end{cases}$$

I offer to you attention a solution of this problems as problem of General theorem arithmetic,[1] :

Every natural number N is either prime or can be uniquely factored as a product of primes in a unique way.

Primes A = { 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, ...,1081,…. }

and as problem of Principle general (geometrical) co-variation, see [2].

P a r a d i g m

«Here is not the best place to come to detailed philosophical or psychological analysis of mathematics. Any where I'd like to stress a few moments. Excessive underlining of axiomatic- deductive character of mathematics seems to be very dangerous. Of course, beginning of any constructive creative work (intuitive origin) is a source of our ideas and arguments, hardly keeps within simple philosophical formula; and anywhere just this origin is a genuine core of any mathematical discovery, even if it belongs to the most abstract spheres. If a target is a clear deductive form, so the motive of mathematics is intuition and construction.», [1].

Being directed by this initial position of outstanding mathematician R. Curant I offer to readers attention a result of intuitive construction from which can follow any axiomatic-deductive constructions. Intuitive -constructive origin is always very simple. Here is the beginning of such constructions:

PART № 1
Non-modular elliptic curves

It is natural numbers:
N = 1, 2, 3, 4, 5, 6, 7, …., ∞
the quantity of the variables numbers N is endless series.

If numbers v > u are the numbers of various evenness taken from endless series of natural numbers, then
IS UNITED SYSTEM NUMBERS:

1. The natural numbers N,

2. The primitive Pythagorean triplets

(7)
$$a_0 = v^2 - u^2$$
$$b_0 = 2vu$$
$$c_0 = v^2 + u^2$$

3. The primitive Diophantine triplets

(8)
$$a_* = \sqrt[n]{a_0{}^2 \times D_n}$$
$$b_* = \sqrt[n]{b_0{}^2 \times D_n}$$
$$c_* = \sqrt[n]{c_0{}^2 \times D_n}$$

Here:

(9)
$$D_n = (a_0{}^{n-2} + b_0{}^{n-2} + c_0{}^{n-2}) / 3$$

common multiplier as generalized proportionality coefficient

Comment

Triplets (a_*, b_*, c_*) is roots for equation of Fermat:

(10)
$$a_*{}^n + b_*{}^n = c_*{}^n$$

THEOREM № 1

According of Principle general (geometrical) co-variation , [2], elliptic curve

(11)
$$Y^2 = X(X - A)(X + B)$$

be of universal geometrical equivalent, see Fig.1:

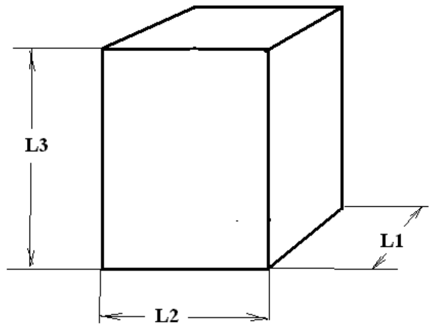

Fig.1

Here:

(12) $$L1 = (X - A)\ ;\quad L2 = X\ ;\quad L3 = (X + B)\ ;$$

If

$$\left| \begin{array}{l} L1 = a^n \\ L2 = b^n \\ L3 = c^n \end{array} \right.$$

then we have the following mathematical construction :

(13) $$a^n \times b^n \times c^n$$

and the following mathematical construction:

(14) $$a^2 \times b^2 \times c^2$$

as construction for equation of Pythagoras:

(15) $$a^2 + b^2 = c^2$$

It is concrete realization of Principle general (geometrical) co-variation.

THEOREM № 2

Equation of Diophant - Fermat:

(16) $$a^n + b^n = c^n$$

is equivalent for equation Pythagoras, if n = 2 :

(17) $$a^2 + b^2 = c^2$$

and for equation non-modular elliptic curve:

(18) $$Y^2 = (X^* - A^*) \times X^* \times (X^* + B^*)\ ,$$

if (a,b,c) :

(19)
$$a = a_0 = (v^2 - u^2)$$
$$b = b_0 = (2vu)$$
$$c = c_0 = (v^2 + u^2)$$

(21) is primitive Pythagorean triplets
and
$$v > u$$
is numbers of various evenness taken from endless series of natural numbers.

Here numbers A^*
WILL NOT DIVIDE INTO / BY

(22)
$$16 = 4 \times (b_0 = 2vu) = 4 \times (b_0 = 2 \times 2 \times 1)$$

(here v = 2 and u = 1) .

Only one thing can be deduced:

Hypothesis of Shimura-Thaniyama
«All elliptic curve is modular curve» [3],
is a wrong hypothesis
according
proof of A.Wiles [4] is a wrong proof .

CONSEQUENCE № 1

Here all numbers is reciprocals primes:

$$Y^2 = a_0{}^2 \times b_0{}^2 \times c_0{}^2 =$$
$$= (X^* - A^*) \times X^* \times (X^* + B^*)$$

(23)
$$Y = a_0 \times b_0 \times c_0 =$$
$$= \text{function}\,[(v^2 - u^2)(2vu)(v^2 + u^2)]$$

CONCEQUENCE № 2

According Fundamental theorem arithmetic this equality

(24)
$$Y^n = (a_* \times b_* \times c_*)^n =$$
$$= (a_0 \times b_0 \times c_0)^n$$

contents all non-integer roots

$$(a_*{}^n, b_*{}^n, c_*{}^n)$$

for equations:

(25)
$$a_*{}^n + b_*{}^n = c_*{}^n$$

(26)
$$a^n + b^n = c^n$$

Here:

(27)
$$a = a_* \times S$$
$$b = b_* \times S$$
$$c = c_* \times S$$

and S common multiplier.

EXPLANATORY EXAMPLE

(28)
$$\begin{aligned} a_0 &= 12 \\ b_0 &= 35 \\ c_0 &= 37 \end{aligned}$$

(29)
$$\begin{aligned} Y^2 &= {a_0}^2 \times {b_0}^2 \times {c_0}^2 = \\ &= 144 \times 1225 \times 1369 = \\ &= 241491600 \end{aligned}$$

(30)
$$Y = a_0 \times b_0 \times c_0 = 15540$$

(31)
$$\begin{aligned} (X^* - A^*) &= {a_0}^2 = 144 \\ X^* &= {b_0}^2 = 1225 \\ (X^* + B^*) &= {c_0}^2 = 1369 \end{aligned}$$

(32)
$$\begin{aligned} B^* &= 1369 - X^* = \\ &= 1369 - 1225 = \\ &= {a_0}^2 = (v^2 - u^2)^2 = 144 \end{aligned}$$

(33)
$$Y = a_0 \times b_0 \times c_0 = 15540$$

(34)
$$\begin{aligned} (X^* - A^*) &= {a_0}^2 = 144 \\ X^* &= {b_0}^2 = 1225 \\ (X^* + B^*) &= {c_0}^2 = 1369 \end{aligned}$$

(35) $$A^* = X^* - 144 = \\ = 1225 - 144 = 1081$$

Here number A^*

WILL NOT DIVIDE INTO / BY

(36) $$16 = 4 \times (b_0 = 2vu) = 4 \times (b_0 = 2 \times 2 \times 1)$$

(here v = 2 and u =1)

C O N S E Q U E N C E № 3

From which follows the calculated form for endless ensemble of primes numbers:

$$A = (b_0{}^2 - a_0{}^2)$$

NOTE

To an infinite REGULAR line of natural numbers:

$$N = 1, 2, 3, 4, 5, 6, 7, ...$$

corresponds an infinite REGULAR line of simple numbers:

Every natural number N is either prime or can be uniquely factored as a product of primes in a unique way.

Primes = { 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, ...,1081,.... }

calculated with the help of the my formula .

Preservation of an attribute of the REGULARITY is provided with a regularity of assignment of pairs numbers:

$$v = u + 1$$

which structure includes only EVEN NUMBERS v .

Infringement of this condition can break in some cases the basic property of the my formula - formation of infinite lines of simple numbers.