IT IS BROAD INTERPRETATION For my article Non-modular elliptic curves as calculate solutions for problems of P.Fermat, A.Poincare and A.Beal See <u>http://yvsevolod-28.narod.ru/index.html</u> (reference № 13 and № 1, № 2)

Some sources assert that the link between the Great Fermat's theorem and Taniyama-Shimura's hypothesis. The other sources assert that Ribet proved that Frey's curve was not modular.

The others assert that Frey assumed that the proof of Taniyama-Shimura's hypothesis would automatically prove the Great Fermat's theorem. But Frey's article is inaccessible for a reader. The third assert that Ribet proved Frey's assumption. The forth consider that Ribet proved that Frey's curve was not modular. The fifth consider that Taniyama-Shimura's hypothesis was proved by Wiles, and so on. Moreover, the assertions of some people contradict to the assertions of the others. Everybody admires the proof of Great Fermat's theorem but nobody saw it in full scope. And taking into account the proofs of Fermat's theorem for the cases n=3, n=4. The riddle of a proof. The search in the Internet did not help to solve the riddle. The result is very unexpected and pitiful.

Why is objective Truth ? The objective Truth is here:

The main mistake of Andrew Wiles:

Shimura-Taniyama's hypothesis states that any elliptical curve is modular. In particular, the elliptical curve described by the equation:

 $\mathbf{Y}^2 = (\mathbf{X} - \mathbf{K}) \times \mathbf{X} \times (\mathbf{X} + \mathbf{D})$

with the integer coefficients must be modular.

Andrew Wiles proved Shimura-Taniyama's hypothesis: «All elliptic curves are modular curve» It is notauthentic hypothesis. According Proof of A.Wiles, is unauthentic proof. Let us trace the way from Taniyama-Shimura's hypothesis to Fermat's theorem, of course. That is he proved that the elliptical curve described by the equation: $Y^2 = (X - K) \times X \times (X + D)$

with the integer coefficients was modular. That is the following equations correspond to modular curves:

- (-- --) -- (-- -)

(1)

ANDREW WILES :

The elliptic curves, described by the equation (1), is modular curves.

KEN RIBET: The elliptic curves, described by the equation (1), is non-modular curves.



V.S.YAROSH :

Equation

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

described by the non-modular elliptic curves,

if: (X - A) = a_0^n X = b_0^n (X + B) = c_0^n

then we have equivalent for equation (2):

$$Y^{2} = a_{0}^{n} \times b_{0}^{n} \times c_{0}^{n}$$

Here:
$$a_{0} = v^{2} - u^{2}$$

$$b_{0} = 2vu$$

$$c_{0} = v^{2} + u^{2}$$

primitive triplets of Pythagora's and v > u

are the numbers of various evenness taken from endless series of natural numbers.

Numbers

$$A = (X - a_0^n) = (b_0^n - a_0^n)$$

in equations (2) for non-modular elliptic curves WILL NOT DIVIDE INTO $16 = 4 \times (b_0 = 2vu) = 4 \times (b_0 = 2 \times 2 \times 1)$ (here v = 2 and u = 1)

EXAMPLE

$$a_0 = v^2 - u^2 = 2^2 - 1^2 = 3$$

 $b_0 = 2vu = 2 \times 2 \times 1 = 4$
 $c_0 = v^2 + u^2 = 2^2 + 1^2 = 5$

For n=5 we have:

$$A = (X - a_0^{5}) = (b_0^{5} - a_0^{5}) =$$
$$= (4^{5} - 3^{5}) = (1024 - 243) =$$
$$= 781$$

781/16 = 48.8125

For n=46 end $(16)^{22}$ we have:

$$A = (X - a_0^{46}) = (b_0^{46} - a_0^{46}) =$$

= (4⁴⁶ - 3⁴⁶) =
(4.9517602 × 10²⁷ - 8.8629381 × 10²¹) =
= 4.9517513 × 10²⁷

$$4.9517513 \times 10^{27} / (16)^{22} =$$

= 4.9517513 \times 10^{27} / 3.0948501 \times 10^{26} =
= 15.99997137....

et cetera, et cetera....

The main blow at Wiles's proof was struck by a Texas millionaire Andrew Beal with active participation of the American Mathematical Society.

He formulated Beal's Problem (Beal's conjecture) and succeeded in getting its recognition at the American Mathematical Society: "The conjecture and prize was announced in the December 1997 issue of the Notices of the American Mathematical Society".

Beal's conjecture is a more general theorem than Fermat's theorem :

Let's take A, B, C, x, y, z are positive whole numbers at which x, y, z > 2. If there are solutions of this equation $A^{x} + B^{y} = C^{z}$ then A, B, C have a common multiplier.

I offer to you attention a solution of this problem as solution of system of equations by A. Beal and P.Fermat (see my article) :

 $A^{x} + B^{y} = C^{z}$ $A^{p}x + B^{q}y = C^{r}z$ $a^{n} + b^{n} = c^{n}$

Solution of this system of equations supports mathematical foreknowledge by A.Beal and connection of this foreknowledge with ELEMENTARY proof of the last theorem by P.Fermat.

The difference consists in the fact that the exponents at number's bases may be different.

Wiles's method was unable to hold its ground against this Beal's task.

The reason is one and the same. It is impossible to replace Beal's equation, as well as Fermat's equation, by the MODULAR equation of elliptical curve.

GENERAL CONCLUSION

In my article

NON-MODULAR ELLIPTIC CURVES AS CALCULATE SOLUTIONS FOR PROBLEMS P.FERMAT, A.POINCARE AND A.BEAL the real fact, instead of phantom, existence of infinite set of non-modular elliptic curves is proved:

 $Y^{2} = (X - A) \times X \times (X + B) \equiv$ $\equiv a_{0}^{n} \times b_{0}^{n} \times c_{0}^{n}$ here $n \ge 2 \quad \text{if} \quad n \to \infty$ and $a_{0} = v^{2} - u^{2}$ $b_{0} = 2vu$ $c_{0} = v^{2} + u^{2}$ primitive triplets of Pythagoras,
if numbers :

v > u

are the numbers of various evenness taken from endless series of natural numbers.

Discovering of the fact of existence of infinite set non- modular elliptic curves is equivalent to the direct proof of validity of Great or Last theorem of P.Fermat.

Fermat approved the following:

" It is impossible to write down a cube as the sum of cubes, or the fourth degree as the sum of the two fourth degrees, or, in general, any number which is a degree, the greater, than the second, is impossible to write down as the sum of two same degrees "

From the equation of my non - modular elliptic curves follows the formula for infinite set of invariants of P.Fermat:

 $Y^{2}/(a_{0}^{n} \times b_{0}^{n}) \ge (a_{0}^{n} + b_{0}^{n})$

At n=2 from this formula follows the equation - equality of Pithagora:

$$Y^{2}/(a_{0}^{2} \times b_{0}^{2}) = (a_{0}^{2} + b_{0}^{2}) = c_{0}^{2}$$

At n> 2 from same formula follows the inequality right part of which is identified with the equation of Dyophantes-Fermat :

$$Y^{2}/(a_{0}^{n} \times b_{0}^{n}) > [(a_{0}^{n} + b_{0}^{n}) = c_{0}^{n}]$$

Thus, between my non - modular elliptic curve and equation of Dyophantes- Fermat exists direct genetic connection.

All properties of my non- modular elliptic curve are automatically transferred to area of properties of the equation of Diophantes-Fermat.

It also is the direct proof of validity of this theorem.

Simultaneously, this fact discredits hypothesis of G.Shimura – Y.Taniyama and proof of A.Wilse, based on this hypothesis.

> Hypothesis of Shymura-Thaniyama «All elliptic curves are modular curve» is notauthentic hypothesis . According proof of A.Wiles, is unauthentic proof .

> > Sincerely Yaross

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