

About Tenth Problem of D. Hilbert

¹*Bagram Kochkarev

(Department of Mathematics and Mathematical Modeling, Institute of Mathematics and Mechanics Named After Nikolai Ivanovich Lobachevsky, Kazan (Volga Region) Federal University, Kazan, Russia)

Corresponding Author: 1*Bagram Kochkarev

ABSTRACT: In this article the author prove unsolvability of tenth problem of Hilbert

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I. INTRODUCTION

Tenth problem D.Hilbert is one of the tasks which he proposed at the second International Congress of mathematician in Paris. It consist in finding an algorithm determining the solvability of an arbitrary Diophantine equation in integers.

II. UNSOLVABILITY HILBERT'S PROBLEM

Definition. An equation of the form $P(x_1, x_2, \dots, x_n) = 0$, where P is a polynomial with integer coefficients is called Diophantine equation..

An special case of the Diophantine equations are Diophantine equations of Fermat: $u^n + v^n = w^n$. In [1-2] it was shown that $u^n + v^n = w^n, n > 2, uvw \neq 0$ has no solutions in the field of rational numbers. For $n = 3, 4$ has a solution in radicals and for $n > 4$ in general algorithmically unsolvable. Hence, as a consequence implies the unsolvability of the tenth problem of D. Hilbert. Note that in [3] we refuted well-known thesis Turing. Church and Markov. Therefore any mathematical statement in the proof of which uses one the above thesis cannot be regarded as proven. It is known [4] that the proof of the unsolvability of Hilbert's tenth problem by Matiyasevich uses Church's thesis which for the above reason is incorrect. Note also that our proof of the unsolvability of Hilbert's tenth problem delivery us algorithmically unsolvable Diophantine equations in general and not just in whole numbers.

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