Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Critical Analysis of the Mathematical Formalism of Theoretical Physics. III. Pythagorean Theorem TEMUR Z. KALANOV, Home of Physical Problems, Pisatelskaya 6a, 100200 Tashkent, Uzbekistan — The critical analysis of the Pythagorean theorem and of the problem of irrational numbers is proposed. Methodological basis of the analysis is the unity of formal logic and of rational dialectics. It is proved that the Pythagorean theorem (i.e., $a^2 + b^2 = c^2$ where segments a, b, and c are the legs and the hypotenuse of the right-angled triangle, respectively) does not represent an absolute scientific truth: this theorem represents a conventional theoretical proposition. The essence of the Pythagorean theorem is that the Pythagorean theorem is a logical error and, therefore, leads to appearance of irrational numbers when the sum $a^2 + b^2$ cannot be transformed into the area of the square having side c. Irrational number is image of calculation process and, therefore, it does not exist on the number scale.

Temur Z. Kalanov
Home of Physical Problems, Pisatelskaya 6a, 100200 Tashkent, Uzbekistan

Date submitted: 24 Oct 2013 Electronic form version 1.4