

TEMPLE UNIVERSITY

MATH CLUB

Three Approaches to Fermat's Two Square Theorem

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ABSTRACT: Number theory is a remarkable branch of mathematics. Many of its problems are simple to state and understand, but the proofs use a large variety of techniques from different branches of mathematics. In this talk, we will present Fermat's beautiful theorem about the sums of two squares and give three different proofs. One proof will be elementary, one proof will use geometry, and the final proof will use the complex numbers. These three proofs will display some of (but certainly not all!) the different approaches used to solve problems in number theory. This talk should be accessible to anyone with knowledge of modular arithmetic and basic proof theory.

FRIDAY, OCTOBER 21, 2011

REFRESHMENTS FROM 12:45

TALK: 1:00 – 1:50 PM

ROOM 617, WACHMAN HALL
DEPARTMENT OF MATHEMATICS