Solving a Mathematical Mystery: Schinzel's Conjecture

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In 1948, Paul Erdos and Ernst G Straus formulated the Erdos-Straus Conjecture, which states that for any natural number n, the equation 4/n=1/x + 1/y + 1/z is solvable in positive integers x, y and z. This is an open problem in mathematics and has no solution as of yet. Mordell has proved it for all numbers except those primes that are congruent 1, 121, 169, 289, 361, or 529 modulo 840. Andrzej Schinzel later generalized this conjecture, stating that for any positive integer m, there exists a natural number N such that, for all integers n greater than or equal to N, there exists a solution in positive integers to m/n=1/x + 1/y + 1/z. This project aims to prove Schinzel’s conjecture, especially the case m=6.

Awards Won:

Mu Alpha Theta, National High School and Two-Year College Mathematics Honor Society: First Award of $ 1,500