Proof announced for 356-year-old math theorem

By Stevenson Swanson
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CHICAGO — Geniuses of the world, take note: Go ahead and finish that symphony, paint that masterpiece, discover the secret of perpetual motion, your efforts at solving Fermat's Last Theorem are no longer needed.

Since the mathematical conundrum was first proposed 356 years ago, hundreds of real or self-proclaimed masterminds have tried either proving or disproving it. Many have claimed triumph, only to see their claim wither under scrutiny.

But on Wednesday, a Princeton University mathematician announced in England that he had proved the theorem, considered one of the most famous in mathematics.

A rigorous review by academics could trip up this latest claim, but it is seen as a solid contender because of the reputation of the mathematician, Dr. Andrew Wiles, and because it builds on existing work.

In 1637, when the French mathematician Pierre de Fermat first proposed his deceptively simple theorem about numbers, news took weeks to cross the Atlantic. But word of the long-sought solution arrived in the United States moments after Wiles had finished his lecture at Cambridge University.

Professor Lee Rubel, a mathematician at the University of Illinois, received a message Wednesday by electronic mail on a computer. The sender was another Illinois professor, Nigel Boston, who was at the Cambridge conference.

"The message said Wiles had announced a solution," said Rubel. "'Announced' is a strong word in mathematics."

Professor Robert Zimmer, head of the University of Chicago's mathematics department, also got the news from Cambridge by electronic mail, from fellow Chicago professor Spencer Bloch.

On Thursday, it was the prime topic of hallway conversation.

"Absolutely, there was excitement and elation and amazement," Zimmer said of his colleagues' reaction. "And they were stunned too. Not that people thought it would never happen, but that it happened right now after so many hundreds of years. To say that it happened right now, it stuns you."

The small, intensely specialized world of mathematics is abuzz, but mathematicians note that outsiders can appreciate Wiles' accomplishment because Fermat's theorem is one of the few generally understandable puzzles in modern mathematics.

"It's like running a 3-minute mile," said Rubel. "Even if you're not an athlete, you can understand it."

"A high school student can understand the problem," said Rubel, "but to understand the solution, you need three more years of high school, four years of college, four years of graduate school and some specialized training after that."

"These unsolved problems are like the piece of sand in an oyster," said professor John Allen Paulos, mathematics professor at Temple University and author of Innumeracy, which argues that Americans need to improve their mathematical understanding to survive in the modern world. "They irritate people. It's not so much that the grains of sand are important, but they lead to pearls, whether real or of the mathematical kind."