

Fermat's Last Theorem

Historical Perspective on a
Mathematical Challenge

Fermat's Challenge

- Fermat claimed no positive integer solutions exist for the equation below

$$-x^n + y^n = z^n, n > 2$$

- Mathematicians proved special cases for $n = 3$ and $n = 4$

Pythagorean Case & Examples

- The case $n = 2$ is the Pythagorean theorem

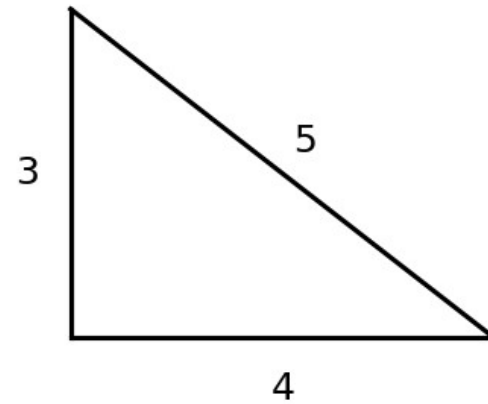
- $a^2 + b^2 = c^2$

- $3^2 + 4^2 = 5^2$

- $\frac{1}{2}$

- α^2

[3]



Andrew Wiles & Significance

- Andrew Wiles announced a proof of the theorem in 1993
- The proof involved complex modern mathematics
- It connected number theory and geometry, inspiring further research