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A Proof of Fermat's Last Theorem

In this paper, I provide a proof of Fermat's last theorem which states that there is no positive solution for a, b, and c in the equation $a^n + b^n = c^n$ where $n \in \mathbb{Z}$ and $n > 2$. [1]

Proof:

$$a^n + b^n = c^x$$

$$a^n + b^n = x\ln(c)$$

$$x = \frac{a^n + b^n}{\ln(c)}$$

$$x = \frac{n\ln(a) + n\ln(b)}{\ln(c)}$$

$$x = \frac{n[\ln(a) + \ln(b)]}{\ln(c)}$$

$$n = \frac{x\ln(c)}{\ln(ab)}$$

Is $x = n$? If $x = n$, then $a^n + b^n = c^n$ is true.

$$x = n = \frac{a^n + b^n}{\ln(c)} = \frac{x\ln(c)}{\ln(ab)}$$

$$(a^n + b^n)[\ln(ab)] = \ln(c)\,[x\ln(c)]$$

$$a^n + b^n = \frac{\ln(c)\,[c^x]}{\ln(ab)}$$

$$a^n + b^n = c^x\left(\frac{\ln(c)}{\ln(ab)}\right)$$

$a^n + b^n = c^x\left(\frac{\ln(c)}{\ln(ab)}\right)$ is equal to $a^n + b^n = c^x$ if $\frac{\ln(c)}{\ln(ab)} = 1$, or else $x \neq n$.

Reference

[1] Singh, pp. 18–20.