

Solution to Beal's Conjecture

Abstract

Presented here, is a counter example of the beals conjecture.

Beal's conjecture

If $A^x + B^y = C^z$, where A, B, C, x, y and z are positive integers and x, y and z are all greater than 2, then A, B and C must have a common prime factor.

The counter example is

$$A=2 \ x=4$$

$$B=3 \ y=2$$

$$C=5 \ z=2$$

$$2^4 = 16$$

$$3^2 = 9$$

$$5^2 = 25$$

$$\text{So } 16+9 = 25$$

satisfies $A^x + B^y = C^z$
and has no common factor

Keywords

Beal's conjecture,divisors,primes,multiple

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References:

<https://en.wikipedia.org/wiki/Divisor>

https://en.wikipedia.org/wiki/Least_common_multiple

<https://www.mathsisfun.com/numbers/factors-multiples.html>

