

# Answer to Beal's 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.

## Abstract

This paper, tends to solve the Beal's Conjecture, using the fact that a prime number is only divided by himself and one. So for both A and B if they are primes, and if they are different, there isn't any common prime factor. The primes elevated to a exponent, for example for A=2, x=3, then  $A^3 = 2*2*2$ . As we can see it only has prime factors equal to himself

For A different B

$$B=3, B^3 = 27 \text{ (} 3*3*3 \text{ , prime factor 3)}$$

$$A=2, A^3 = 8 \text{ (} 2*2*2 \text{ prime factor 2)}$$

So as we can see, if they are different, they don't share a common prime factor

It's worth mentioning, that if A equals B and equal to C, then they do have a common prime factor

## Keywords

Beal's conjecture, divisors, primes, multiple

## Palavras Chave:

conjunto de beals, primos, divisores, múltiplo

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