Solution to Beal's Conjecture

Abstract

This document, tries to resolve a solution by bruteforcing all possible solutions, using the concepts of even and odd numbers.
First, the problem deals with A^x , this is A*A*A…., since odd numbers, and even numbers, multiplying by them self, always remain odd or even.
So for parity concerns, we can just take A and B and C.
Then just use the properties of parity numbers, (in the table below), and check if there is a commond factor. To check for common factors, the parity must be equal in all checks (even or odd, for example in table number 3 they are all even and so, common factor of 2.

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.

	A ^x	B^y	C^z
1	Even	Odd	Odd
2	Odd	Even	Odd
3	Even	Even	Even
4	Odd	Odd	Even

1) Considering that an odd number divided by an even number is not a integer
2)A number multiplied by himself has the same parity as the number

Even + Odd = Odd =====> Odd+Even= Odd
Even is divisible by 2, and odd arent so no common factor

Even+Even = Even (common factor 2)

odd+odd = Even (no common factor)

So, there's only one situation where there is a common factor. That is A=Even, B=Even and C=Even

keyword
Beal's conjecture,divisors,primes,multiple,parity

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