BEAL’S CONJECTURE-COUNTER EXAMPLES

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ABSTRACT: In [1-4], proof for Beal’s Conjecture has been presented. Counter examples for Beal’s Conjecture are presented in this paper.

1. STATEMENT OF BEAL’S CONJECTURE:
If $A^x + B^y = C^z$
Where $A, B, C, x, y, z \in \mathbb{Z}^+$ and $x, y, z > 2$ then $A, B, C$ have a common prime factor.

Counter example: 1
$[2^{88} + 99999999999999^3] = 10^{39}$
Here, $A = 2; B = 99999999999999; C = 10$
$x = 88 \quad y = 3 \quad z = 39$
Note that $x, y, z > 2$ But $\text{gcd} (A, B, C) = 1$

Counter example: 2
$[2^{233} + 99999999999999996] = 10^{84}$
Here, $A = 2; B = 99999999999999999; C = 10$
$x = 233 \quad y = 6 \quad z = 84$
Note that $x, y, z > 2$ But $\text{gcd} (A, B, C) = 1$

Counter example: 3
$[2^{205} + 999999999999999995] = 10^{75}$
Here, $A = 2; B = 999999999999999999; C = 10$
$x = 205 \quad y = 5 \quad z = 75$
Note that $x, y, z > 2$ But $\text{gcd} (A, B, C) = 1$

Counter example: 4
$[2000000000000000^3 + 15000000000000^3] = 22489707226377^3$
Here, $A = 20000000000000; B = 15000000000000; C = 22489707226377$
$x = 3 \quad y = 3 \quad z = 3$
Note that $x, y, z > 2$ But $\text{gcd} (A, B, C) = 1$ $\text{gcd}$ – greatest common divisor.
References


