BEAL’S CONJECTURE-COUNTER EXAMPLES
S.SARAVANAN  B.E., (Civil)
NO: 75. Kalanivasal New Road, Karaikudi -630 001
Tamilnadu, South India.

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

$[2^{88} + 9999999999993^2] = 10^{39}$
Here, $A = 2; B = 999999999999; C = 10$
$x = 88, y = 3, z = 39$
Note that $x, y, z > 2$ But gcd $(A, B, C) = 1$

Counter example: 2

$[2^{233} + 99999999999999^2] = 10^{84}$
Here, $A = 2; B = 99999999999999; C = 10$
$x = 233, y = 6, z = 84$
Note that $x, y, z > 2$ But gcd $(A, B, C) = 1$

Counter example: 3

$[2^{205} + 99999999999999^2] = 10^{75}$
Here, $A = 2; B = 99999999999999; C = 10$
$x = 205, y = 5, z = 75$
Note that $x, y, z > 2$ But gcd $(A, B, C) = 1$

Counter example: 4

$[2000000000000^3 + 1500000000000^3] = 22489707226377^3$
Here, $A = 2000000000000; B = 1500000000000; C = 22489707226377$
$x = 3, y = 3, z = 3$
Note that $x, y, z > 2$ But gcd $(A, B, C) = 1$ gcd – greatest common divisor.
References


