[All Pythagorean triples]

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All Pythagorean triples cannot be the power numbers.
The figure (XY) cannot be the power number in co prime (A,B).

$X=(2AB)^{1/2}+A,\ Y=(2AB)^{1/2}+B,\ Z=(2AB)^{1/2}+A+B$

$2AB=k^2$(k is 1,2,3...)

$XY=k(k+A)(k+2A)/2A=k(k+B)(k+2B)/2B$

When $A=c^2,\ B=2d^2$

$XY=2cd(c+d)(c+2d)$

The figure $2cd(c+d)(c+2d)$ cannot be the power number in co prime (c,d).

When $c=e^n,\ d=2^{(n-1)}f^n$

$(2ef)^n\{e^n+2^{(n-1)}f^n\}[e^n+2\{2^{(n-1)}f^n\}]=(2efst)^n$

The numbers (s,t) cannot be the natural numbers.

$\{e^n+2^{(n-1)}f^n\}[e^n+2\{2^{(n-1)}f^n\}]=(st)^n$

$\{e^n+2^{(n-1)}f^n\}=s^n$

$\{s^n+2^{(n-1)}f^n\}=t^n$

$1=(t^n-s^n)/(s^n-e^n),\ 2s^n=t^n+e^n$

$\{e^n+f+1\}\{e^n+2(f+1)\}=(st)^n$

$\{e^n+f+1\}=s^n$

$\{s^n+f+1\}=t^n$

$1=(t^n-s^n)/(s^n-e^n),\ 2s^n=t^n+e^n$

$\{e^n+f\}\{e^n+2(f)\}=(st)^n$

$\{e^n+f\}=s^n$

$\{s^n+f\}=t^n$

$1=(t^n-s^n)/(s^n-e^n),\ 2s^n=t^n+e^n$

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$\{e^n+2\}\{e^n+2(2)\}=(st)^n$

$\{e^n+2\}=s^n$

$\{s^n+2\}=t^n$

$1=(t^n-s^n)/(s^n-e^n),\ 2s^n=t^n+e^n$

$\{e^n+1\}\{e^n+2\}=(st)^n$

$\{e^n+1\}=s^n$

$\{s^n+1\}=t^n$

$1=(t^n-s^n)/(s^n-e^n),\ 2s^n=t^n+e^n$

Therefore, the numbers (s,t) cannot be the natural numbers.