

Project_Euler_009

February 4, 2018

1 Project Euler Problem 9

A Pythagorean triplet is a set of three natural numbers, $a < b < c$, for which, $a^2 + b^2 = c^2$

For example, $3^2 + 4^2 = 9 + 16 = 25 = 5^2$.

There exists exactly one Pythagorean triplet for which $a + b + c = 1000$. Find the product abc .

```
In [1]: for a in range(1, 500):
        for b in range(a, 500):
            c = 1000 - a - b
            if ((a**2 + b**2) == c**2):
                print("a = {}".format(a))
                print("b = {}".format(b))
                print("c = {}".format(c))
                print("abc = {}".format(a*b*c))
```

```
a = 200
b = 375
c = 425
abc = 31875000
```