

```
1 target = 600851475143
2 primes = []
3
4 def IsPrime(n):
5     '''check if integer n is a prime'''
6     # make sure n is a positive integer
7     n = abs(int(n))
8     # 0 and 1 are not primes
9     if n < 2:
10         return False
11     # 2 is the only even prime number
12     if n == 2:
13         return True
14     # all other even numbers are not primes
15     if not n & 1:
16         return False
17     # range starts with 3 and only needs to go up the
    squareroot of n
18     # for all odd numbers
19     for x in range(3, int(n ** 0.5) + 1, 2):
20         if n % x == 0:
21             return False
22     return True
23
24 limit = 7000
25
26 for i in range(1,limit):
27     if target % i == 0 :
28         if IsPrime(i) == True:
29             primes.append(i)
30             print("Primes",primes)
31
32 c = primes[0] * primes[1] * primes[2]* primes[3]
33
34 print("Primes Multiplies: ", c)
```