

Euler's project problem 1

John Fox

January 23, 2023

This document serves as a template of your solution of the bonus problem.

Problem statement

By listing the first six prime numbers: 2, 3, 5, 7, 11, and 13, we can see that the 6th prime is 13. What is the 10 001st prime number?

Answer

The 10001th prime number is 104743

Idea

I checked all the numbers below 1000 and took the sum.

Matlab code

```
def nthPrime(n):
    lastPrime = 2
    i = 2
    while n != 1:
        i = lastPrime + 1
        while not isPrime(i):
            i = i + 1
        lastPrime = i
        n = n - 1
    return lastPrime
def isPrime(num):
    for i in range(2, (num // 2) + 1, 1):
        if num % i == 0:
            return False
    return True
print(nthPrime(10001))
```