

Summation of primes

Problem 10 (<https://projecteuler.net/problem=10>)

The sum of the primes below 10 is $2 + 3 + 5 + 7 = 17$.

Find the sum of all the primes below two million.

Solution

```
In [1]: n, q, p = 3, 1, [2]
        while p[-1] < 2000000:
            for x in p:
                if x > q:
                    p.append(n)
                    break
                if n % x == 0:
                    break
            n += 2
            q = int(n ** 0.5)
        print(sum(p[-1]))
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```