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

Using built-in functions:

In[104]:= **Total@Select[Range[2 000 000], PrimeQ] // AbsoluteTiming**

Out[104]= {1.747039, 142 913 828 922}

In[105]:= **Total@Prime[Range[PrimePi[2 000 000]]] // AbsoluteTiming**

Out[105]= {0.479452, 142 913 828 922}