

Problem 1

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Find the sum of all the multiples of 3 or 5 below 1000.

Solution

Algorithm 1 Modular Selection

Let $x = 1, 2, 3, \dots, 999$

if $x \bmod 3 = 0$ or $x \bmod 5 = 0$ **then** $\sum x$

end if

return 233168
