Problem 1.4

A total charge of 300 C flows past a given cross section of a conductor in 30 seconds. What is the value of the current?

Solution

Divide the amount of charge by the time to get the current.

$$i = \frac{Q}{t} = \frac{300 \text{ C}}{30 \text{ s}} = 10 \, \frac{\text{C}}{\text{s}} = 10 \text{ A}$$