

Solutions

Each answer shows the steps, then the **result**.

2.1

- $I = \frac{\Delta q}{\Delta t} = \frac{12}{4.0} = 3.0 \text{ A}$

2.2

- opposite to the electron flow

2.3

- $\Delta q = I \Delta t = 0.50 \times 10 = 5.0 \text{ C}$

3.1 B

3.2 B

3.3

(a)

- $\Delta q = I \Delta t = 2.0 \times 30 = 60 \text{ C}$

(b)

- $N = \frac{60}{1.6 \times 10^{-19}} = 3.75 \times 10^{20} \text{ electrons}$