

11 Current, resistance, and power – Part 1 —Answers

Answers

Work through these after you have tried the questions yourself.

2.1 $I = \frac{\Delta q}{\Delta t} = \frac{10}{5.0} = 2.0 \text{ A}.$

2.2 (a) the current is the same through every component. \ (b) the voltage is the same across every branch.

2.3 $V = IR = 3.0 \times 4.0 = 12 \text{ V}.$

2.4 $P = IV = 0.50 \times 6.0 = 3.0 \text{ W}.$

2.5 $R = \frac{V}{I} = \frac{12}{2.0} = 6.0 \text{ } \Omega; P = IV = 2.0 \times 12 = 24 \text{ W}.$