

Name:

Date:

Class:

## Ohm's Law Math Worksheet Answers

1. A battery is connected to a light bulb in a circuit. There is a current ( $I$ ) of 3 A in the light bulb. The light bulb has a resistance ( $R$ ) of 0.5  $\Omega$ . What is the voltage ( $V$ ) of the battery?

Use  $V = I \times R$  to solve this problem.

$$1.5 \text{ Volts} = 3 \text{ A} \times 0.5 \Omega$$

2. A battery is connected to a light bulb in a circuit. There is a current of 2 A in the light bulb. The voltage of the battery is 1.5 V. What is the resistance of the light bulb?

Use  $R = \frac{V}{I}$  to solve this problem.

$$0.75 \Omega = 1.5 \text{ V} \div 2 \text{ A}$$

3. A battery is connected to a light bulb in a circuit. The voltage of the battery is 1.5 V. The light bulb has a resistance of 1.5  $\Omega$ . What is the current in the light bulb?

Use  $I = \frac{V}{R}$  to solve this problem.

$$1.0 \text{ A} = 1.5 \text{ V} \div 1.5 \Omega$$