Ohms Law Practice Problems

Name: _____

**Voltage = Current * Resistance**

**V = IR**

**I = current (amps)**

**V= voltage (volts)**

**R = resistance (ohms)**

**DIRECTIONS:**

For each problem below, use the triangle to set up the equation. SHOW YOUR WORK. Each part to the left (Voltage, Current, Resistance) should be full.

***INCLUDE YOUR UNITS!!***

1) There is a 28 Ω resistance in the heating element. It is plugged into a 110 V circuit. How much current passes through the heating element?

Voltage: _____

Current: _____

Resistance: _____

Equation:

2) A lamp operates at 115 V with a current of 0.45 A. What is the lamp's resistance?

Voltage: _____

Current: _____

Resistance: _____

Equation:

3) What is the resistance of a light if the voltage is 12.0 V and the current is 0.30 A?

Voltage: _____

Current: _____

Resistance: _____

Equation:

4) What is the total voltage in a circuit if the current passing through is .75 amps, and the resistances is 35 ohms?

Voltage: _____

Current: _____

Resistance: _____

Equation:

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5) If a toaster produces 8 ohms of resistance in a 120 V circuit, what is the amount of current in the circuit?

Voltage: _____

Current: _____

Resistance: _____

Equation:

6) What is the voltage of a circuit with 15 amps of current and a toaster with 12 ohms of resistance?

Voltage: _____

Current: _____

Resistance: _____

Equation:

7) How much resistance would occur in a circuit that had 120 Volts of electricity and had a current of .85 amps?

Voltage: _____

Current: _____

Resistance: _____

Equation:

8) A voltmeter would indicate how much voltage if a circuit had 2.5 amps of current and a total resistance of 65 ohms?

Voltage: _____

Current: _____

Resistance: _____

Equation:

9) An electric train uses a power source of 25 Volts. If the train track has a total of 45 ohms of resistance, what is the current passing through the tracks?

Voltage: _____

Current: _____

Resistance: _____

Equation: