**Ohm’s Law**

Ohm’s Law is the named after the German scientist Georg Ohm who in the 1820s conducted experiments investigating the relationship between potential difference and current on various lengths and types of metal conductors.

The findings of his experiments led to **Ohm’s Law** which states:

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**Variation:**

**Equation:**

**Problems:**

**1.** How much voltage would be necessary to generate 10 amps of current in a circuit that has 5 Ω of resistance?

**2.** An electric heater works by passing a current of 100 A though a coiled metal wire, making it red hot.

If the resistance of the wire is 1.1 Ω, what voltage must be applied to it?

**3.** A 12 Volt car battery pushes charge through the headlight circuit resistance of 10 Ω.

How much current is passing through the circuit?

**4.** If a toaster produces 1.2 x 101 Ω of resistance in a 120-volt circuit, what is the amount of current in the circuit?

**5.** A subwoofer needs a household voltage of 110 V to push a current of 5500 mA through its coil. What is the resistance of the subwoofer?

**6.** What happens to the current in a circuit if a 1.5-volt battery is removed and is replaced by a 3-volt battery?