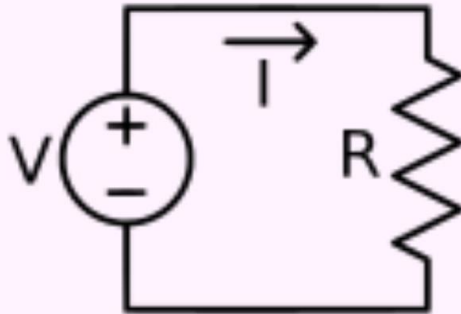


## Ohm's Law\*

\* Describes the relationship between current, voltage, and resistance. **Ohm's Law** states that the potential difference  $V$  across a conductor equals the product of the current in the conductor and its resistance,  $V = IR$ .

### Schematic Diagram of a Simple Circuit conventional current flow



### Ohm's Law

$$V = IR$$

$$I = \frac{V}{R}$$

1. A 9-volt battery supplies power to a cordless curling iron with a resistance of 18 ohms. How much current is flowing through the curling iron?
2. If a current of 200 mA flows through a nichrome wire with a voltage of 125 V, what is the resistance of the nichrome wire?
3. In a circuit, there is resistance of 40  $\Omega$  and a current of 0.15 A. What is the voltage?

### Ohm's Law with Examples

<http://www.problemsphysics.com/electricity/ohms-law-examples.html>