

### Ohm's Law

Use Ohm's law to work the following problems related to series and parallel circuits.

Write down the three equations from Ohm's Law.

1. What is the current in a series circuit with a resistance of  $30\ \Omega$  and a potential difference of 120 volts?
2. What is the voltage in a series circuit with a resistance of  $10\ \Omega$  and a current of 20 Amps?
3. What is the potential difference across a  $30\ \Omega$  resistor that has a current of 10 Amps?
4. What is the total resistance in a series circuit with a  $10\ \Omega$  resistor, a  $30\ \Omega$  resistor and a  $50\ \Omega$ ?
5. What is the potential difference of a  $60\ \Omega$  resistor with a current of 30 Amps?
6. What is the current in a series circuit with a resistance of  $40\ \Omega$  and a voltage of 220 Volts?