# Physical Science 416 - Parallel Circuits

1. A 10 ohm resistor and a 20 ohm resistor are connected in parallel to a 12 V battery.
    a. What is the total resistance of the circuit?

    b. What is the voltage across the 10 ohm resistor?

    c. What is the voltage across the 20 ohm resistor?

    d. What current flows through the 10 ohm resistor?

    e. What current flows through the 20 ohm resistor?

2. Ten lights are connected in parallel to a 120 V source. The current flowing through one light is 2 A.
    a. What is the total current?

    b. What is the total resistance?

3. Two light bulbs (20 Ω and 5 Ω) are connected in parallel to a 12 V source.
    a. What is the total resistance?

    b. What is the total current?

    c. What is the current through the 5 ohm lamp?

    d. What is the current through the 20 ohm lamp?

    e. What is the voltage across the 20 ohm lamp?

4. Three resistors (16 Ω, 20 Ω, 80 Ω) are connected in parallel. The current through the 80 ohm resistor is 3.0 amps.
    a. What is the total resistance?

    b. What is the total voltage?

    c. What is the total current?

    d. What is the current flowing through the 16 ohm resistor?

    e. What is the current flowing through the 20 ohm resistor?