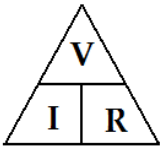
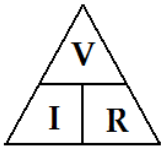
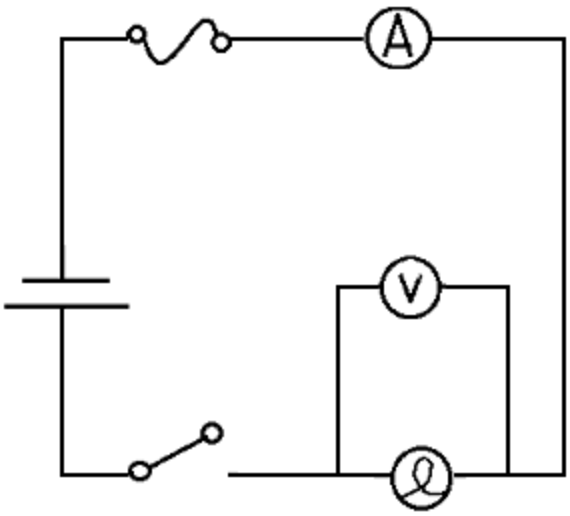


Graphing Ohm's Law



1. On the simple circuit diagram below, label and state the function of each component.



2. Ohm's law is typically expressed as the equation **V=IR**.
   a) How would you arrange Ohm's law to solve for <u>current intensity?</u>

   b) How would you arrange Ohm's law to solve for <u>resistance</u>?

   c) If voltage is increased, and resistance remains the same what would happen to the current intensity?

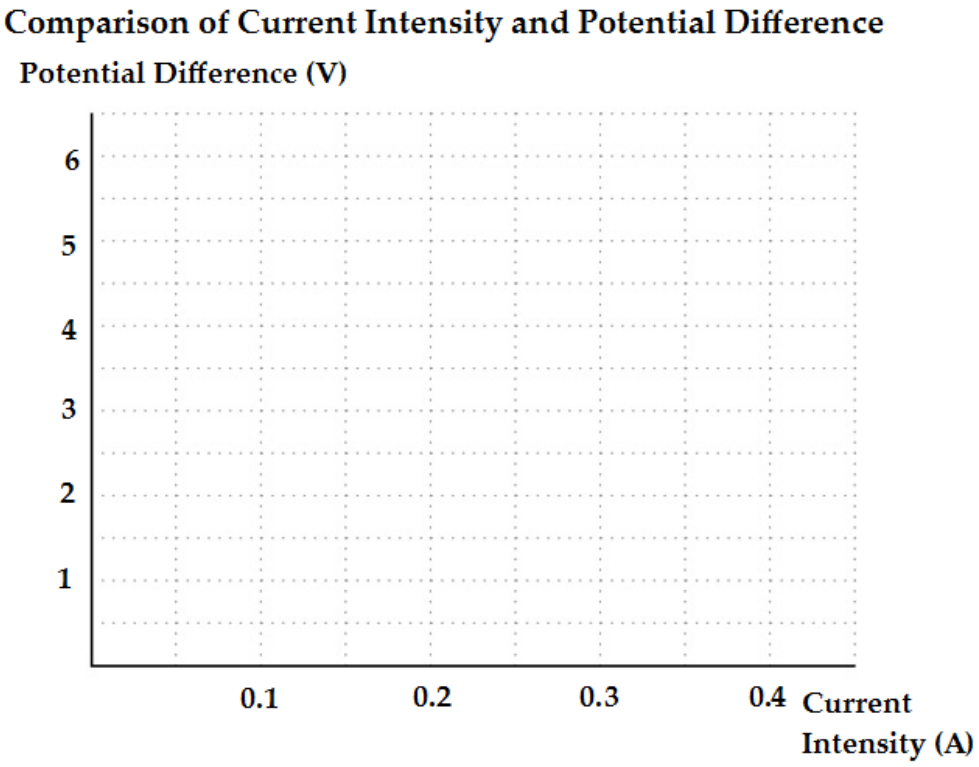
   d) If the resistance in a circuit is increased without changing the potential difference, what would happen to the current intensity?

3. Use the ammeter and voltmeter from the circuit to fill the table to the right with potential difference vs. current intensity values for the light bulb.

NOTE: Do not increase the voltage beyond **4V**.

4. Take the data you've gathered from your ammeter and voltmeter readings and construct a graph of potential difference (Y axis) versus current intensity (X axis).

Current Intensity (A)	Potential Difference (V)



5. Determine the slope of this graph and describe what it represents.