Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_

**Electrical Power**

**Lab #1 – Compute Current Using the Power Formula**

**Equipment and materials**

* Lamp holder with 100-watt bulb
* Lamp holder with 40-watt bulb
* 110-volt power source

**NOTE:** Smaller voltage lamps can be used with an appropriate power supply.

**Procedure**

1. Plug both lamps into 110-volt line and turn switches on at the same time.
2. Let lamps heat up for a brief time.
3. Put a hand close to each lamp and feel which one is hotter: \_\_\_\_ 40-watt \_\_\_\_ 100-watt.
4. Determine which lamp is using more power: \_\_\_\_ 40-watt \_\_\_\_ 100-watt.

**NOTE:** The hotter lamp uses using more power.

1. Read and answer the following.
   * Determine which lamp is using more current: \_\_\_\_ 40-watt \_\_\_\_ 100-watt.
   * Determine which lamp has the lower resistance: \_\_\_\_ 40-watt \_\_\_\_ 100-watt.
   * Using the formula P=VI, compute the current flowing through each lamp.
2. Return lamps to proper storage area.