Series and Parallel Circuits Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Observe the wall-adapter and write down the input and output properties.  
  
 Input:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Output:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Plug in the wall-adapter, measure the output voltage with the voltage sensor, and identify the polarities of the output wires.

Output voltage = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Polarity:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Connect the three bulbs in series and then connect them to the output voltage.

4. Draw a circuit diagram for the above set up.

5. Measure the voltage across each bulb. \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

6. Remove one of the bulbs and describe what happens, and then explain your observation.

7. Connect the three bulbs in parallel and then connect them to the output voltage.

8. Draw a circuit diagram for parallel connection of the bulbs.

9. Predict the following:

a. Voltage across each bulb.\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. What will happen, if one of the bulbs is removed?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_