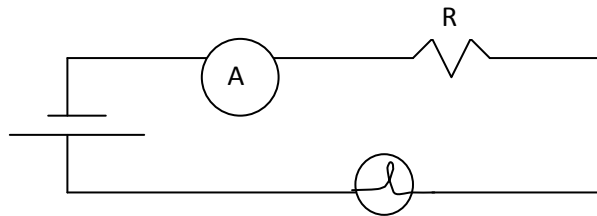**ST**
Power Lab

Name_____

Partner_____

Purpose: To compare the power consumption of a light bulb in a parallel circuit to its consumption in a series circuit.

Procedure:

Part 1 Use the following diagram as a guideline so that you connect a light bulb in series with a resistor. Set the voltage at 3.0 V.

1. What two measurements do you need to get the power of the light bulb? Hint: P=VI. Record them in the table below with the correct unit.

Part 2 Use the following diagram as a guideline so that you connect a light bulb in *parallel* with a resistor. Set the voltage at 3.0 V.
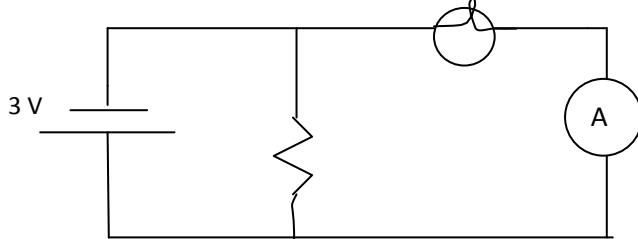
2. What two measurements do you need to get the power of the light bulb? Hint: P=VI. Record them in the table below with the correct unit.

Analysis:

1. In part 1, what was the power consumed by the light bulb?

2. In part 2, what was the power consumed by the light bulb?

3. Why do you think the power consumption was different in the two circuits even though the total voltage was the same?

4. Calculate the energy consumed by the bulb in each circuit if it was on for 2 hours. E = Pt, where t is in seconds and E is in Joules.

Series	Parallel

Conclusion: