

AP Physics Lab

Lab 18-A: Complex Circuits

Equipment:

- mystery circuits
- 60 W light bulbs

Purpose:

- Analyze combinations of series and parallel circuits.
- Calculate the power for a light bulb in a complex circuit.

Procedures:

- Observe the relative brightness and behavior of the light bulbs in each mystery circuit.
- You may loosen light bulbs in each circuit, but you may not open the circuit to view the actual wires.

Report:

1. Calculate the resistance of a standard 60 W light bulb.

Complete the following for Circuits A and B, and one of Circuits C, D, E, and F:

2. Draw a circuit diagram showing the arrangement of the light bulbs in each assigned mystery circuit.
3. Calculate the power dissipated by each light bulb in each assigned mystery circuit.