

AP Physics B

Name:

AP Physics

Series/Parallel Circuit Design lab

Draw a circuit diagram with the following requirements:

3 resistors in series

3 resistors in parallel

One voltage source of 5 or 12 volts (use digital trainers or variable power supply)

(Label diagram and do mathematical calculations to find the current and voltage across each resistor.)

After doing calculations, make this circuit using an electronics trainer or power supply and the supplied resistors and wire. Tape down the actual circuit in lab notebook.

Use a multimeter to determine if the actual value of voltage of each resistor corresponds to the calculated values. Record this data in the table.

Complete a report in the physics lab notebook according to guidelines (objective, procedure, data table/calculations, and conclusion). Within the conclusion, make a statement about the actual versus measured voltages and provide reasoning why or why not they match.