

Lab: Series Resistors

Name _____ Per _____

Purpose: To solve the circuit by measurement & math.

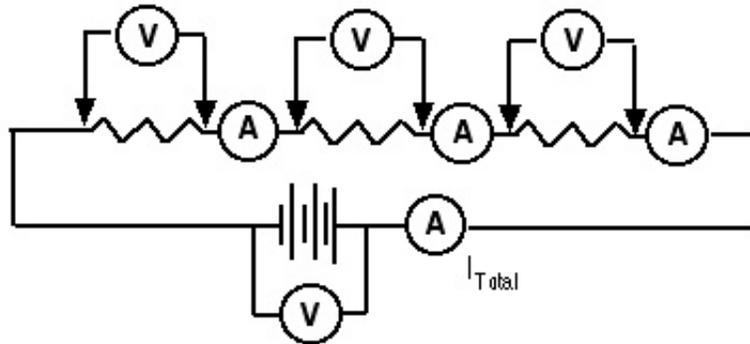
The Voltmeter is always **across** the load.

The Ammeter is always **IN** the circuit, **NEVER** across the circuit or onto the battery!!!!

Quick test the meters to be sure they are connected OK.

Disconnect power when not reading meters.

1. Set up the following circuit with 3 different resistors:



2. Measure the V across each R & the V of the battery when the circuit is on.

3. Measure the amps through each R and the total amps.

4. Using the R of each resistor, (green = 1 ohm, grey = 2 ohms, black = 3 ohms, yellow = 4 ohms, red = 5 ohms) & showing your method, calculate:

a. R total

b. I total

c. V across each R

d. I through each R

e. Power of each R ($P = VI$ in watts).

f. P total of the circuit.

5. Critique-- Compare your measured values with your calculated values & explain why there is a difference.