

## Resistance, Voltage and Current

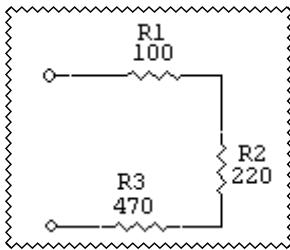


Fig. 1

1. Assemble the circuit in Fig. 1.

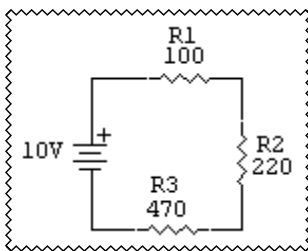
2. Calculate the total resistance.  $R_{eq} =$  \_\_\_\_\_3. Measure total resistance with an ohmmeter.  $R_{total} =$  \_\_\_\_\_

Fig. 2

Assemble the circuit in Fig. 2 but **do not** apply the power.4. Calculate total current.  $I_{total} =$  \_\_\_\_\_

5. Calculate the voltage drop across each resistor.

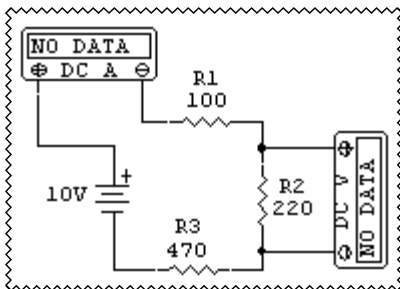
 $V_{R1} =$  \_\_\_\_\_  $V_{R2} =$  \_\_\_\_\_  $V_{R3} =$  \_\_\_\_\_

Fig. 3

Connect the ammeter and voltmeter as suggested in Fig. 3.

6. Apply 10 V to the circuit in Fig. 2.

7. Measure total current using an ammeter.  $I_{total} =$  \_\_\_\_\_

8. Measure the voltage drops across each resistor using a voltmeter.

 $V_{R1} =$  \_\_\_\_\_  $V_{R2} =$  \_\_\_\_\_  $V_{R3} =$  \_\_\_\_\_

9. Do the measured values match the calculated values? What accounts for the difference in values?