

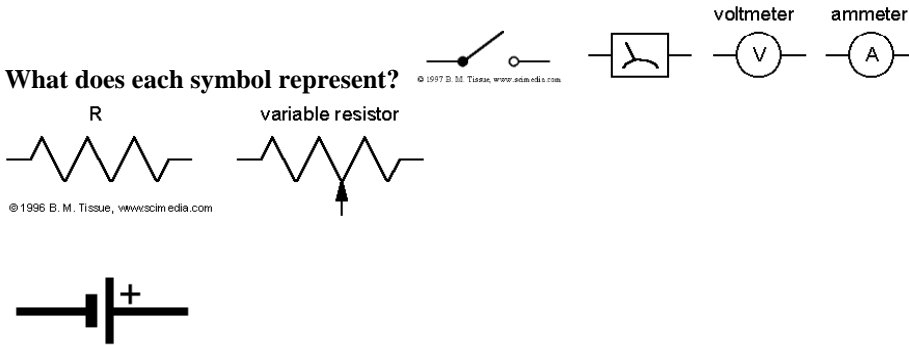
GNSC 1110L LAB PRE-TEST

EXP #7 - OHM'S LAW

**** YOU WILL NEED ONE SHEET OF GRAPH PAPER ****

1. List apparatus in this experiment.

2. What does each symbol represent?



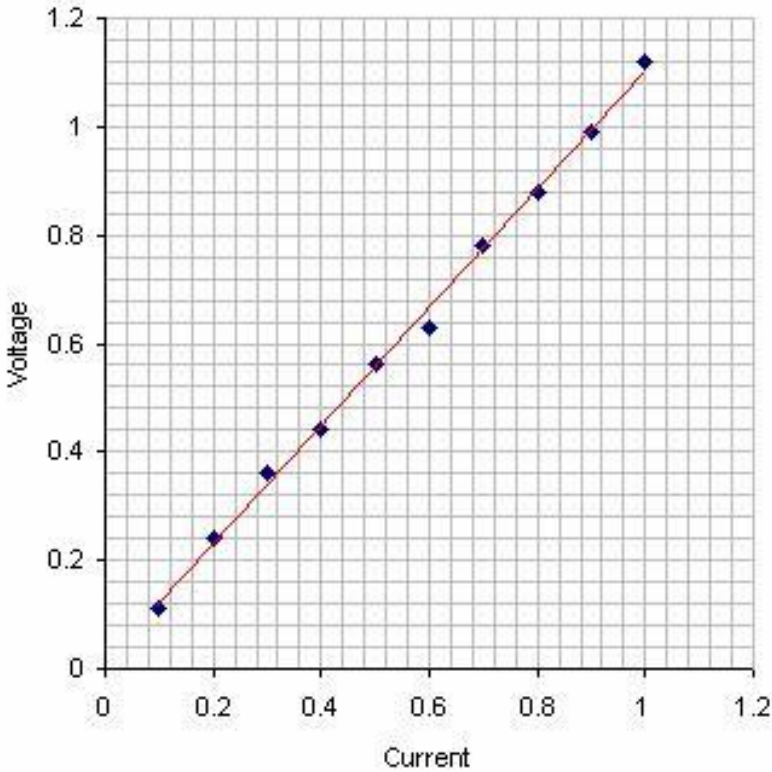
3. A voltmeter is a device to measure the _____ across a resistor and an ammeter is a device to measure the _____ through the resistor.

4. In Fig 1 the voltmeter is connected in _____ with the resistor and the ammeter and the variable DC power source are connected in _____ with the resistor.

5. State Ohm's law in words.

6. Give the equation of Ohm's law. Explain what each variable represents and give proper SI units for each variable.

7. If the graph of voltage vs. current is obtained as shown, find the resistance.



ANS.

2. S - switch V - voltmeter A-Ammeter R-resistor DC - variable direct current power supply

3. Voltage; current

4. Parallel; series

7. Take two points that are on the line for slope calculation (mark with two dashed lines).

$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0.84 \text{ V} - 0.22 \text{ V}}{(0.8 \text{ A} - 0.2 \text{ A})} = 1.03 \Omega \text{ Resistance} = \text{slope} = 1.03 \Omega$$

Below are pictures of real resistors used in electronic circuits.



Carbon Composition Replacement



Company Info



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