

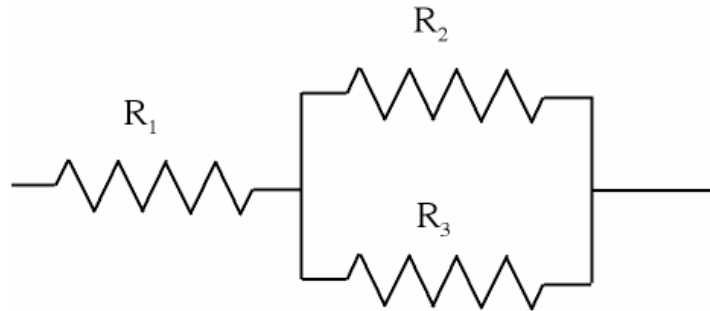
# Kirchoff's Laws

Print Name \_\_\_\_\_

## Pre-lab Test 6 (10 Points)

Lab Section \_\_\_\_\_ Date \_\_\_\_\_

Staple your work sheet to this pre-lab test. You are required to show your calculations! Points will be taken off if your work is not neat and well organized. Be sure to print your name on both sheets.



We are going to analyze the above circuit Using Kirchoff's Laws. We will first apply the current law to the node where the three resistors meet.

- 1) If 103 mAmps flows into the node through resistor 1, and 77.5 flows out of the node through resistor 2, what is the current flowing through resistor 3?

$$I_3 = \underline{\hspace{2cm}}$$

- 2) If the resistance of resistor 3 is 4.70 kOhms, determine the voltage drop across resistor 2 using Kirchoff's Voltage law.

$$V_2 = \underline{\hspace{2cm}}$$

- 3) What is the resistance of resistor 2?

$$R_2 = \underline{\hspace{2cm}}$$

- 4) Assume that the EMF supplied to the circuit is 225 Volts. Use Kirchoffs Voltage law to determine the voltage drop across the first resistor.

$$V_1 = \underline{\hspace{2cm}}$$

- 5) What is the resistance of the first resistor?

$$R_1 = \underline{\hspace{2cm}}$$