

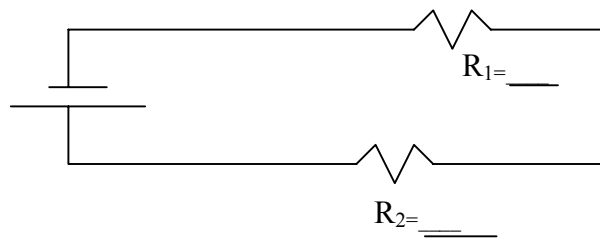
**Parallel Versus Series Circuits (The Sequel)**

**Purpose:** To measure voltage across resistors in a series circuit and to measure the current flowing through resistors connected in parallel.

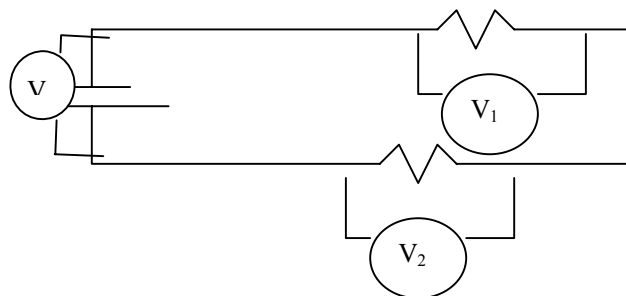


**Procedure:**

1. Build the following circuit with the voltage set at 5 V. Record the letter of your unknown resistor.

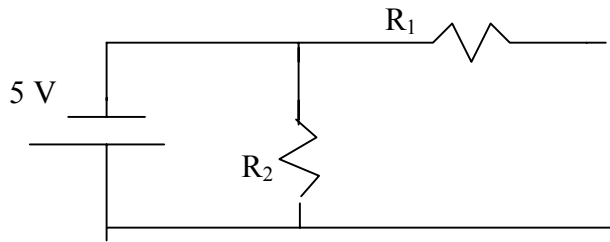


2. Move the voltmeter around so that you measure the voltage for the power supply,  $R_1$  and  $R_2$ . Record your values in the table below.

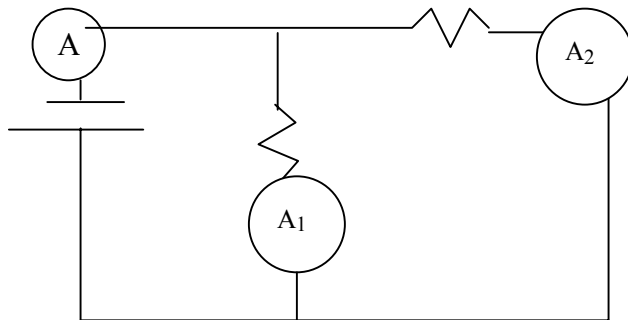


$V_1$	
$V_2$	
$V$	

3. Build the following circuit with the voltage set at 5 V.



4. Move the ammeter around so that you measure the current at three different points in the circuit as shown in the following diagram. Record your values in the table below.



$A_1$	
$A_2$	
$A$	

### Analysis of Results

- In #2, how are  $V$ ,  $V_1$  and  $V_2$  approximately related? Write a formula and check it with the actual measurements from your data table.
- In #4, how are  $A$ ,  $A_1$  and  $A_2$  approximately related? Write a formula and check it with the actual measurements from your data table.

### Conclusion: