Name: ___________________________________ Period: ____________

Series Circuits:

Current & Resistance in a SC

Math is Cool

Energy & Voltage in a SC

Properties of Series Circuits

Lab 21A Electric Circuits (25 points)

Table 1: Pot Settings and Voltage Drops

Pot Dial Position	Voltage drop across pot (V)	Voltage Drop across bulb (V)
0		
2		
4		
6		
8		

Part A: Voltage Drop

1. Go to page 114 and make the circuit shown there. Follow the directions to fill in the table.
2. What is the relationship between the voltage drop across the pot and the voltage drop across the bulb?

____

____

____

3. What relationship do you observe between the measured voltage drop and the batteries voltage? ___________

____

Part B: Series circuits

4. Go to page 115 and build the circuit there. Follow directions 1-2 to fill in the table

Table 2: Voltage Measurements (Volts)

Between A & B (V)	Between B & C (volts)	Between C & D (V)	Between A & D (V)

5. What relationships do you see from the data in Table 2? What does this tell you about the flow of energy in a series circuit?____

   ____

Part C: The current in series circuits

6. Build the circuits one at a time on page 116. Follow directions 1-3 and fill in Table 3.

   Table 3: Current Measurements (amps)

Three Bulbs (A)	Two Bulbs (A)	One Bulb (A)

7. What happens to the current in the circuit as the number of bulbs is reduced? Explain why this occurs using Ohm's law and the concept of resistance. ____

   ____

8. What happens to the other two bulbs when one bulb is removed from the three-bulb circuit? Explain what happens and WHY it happens.

   ____

   ____