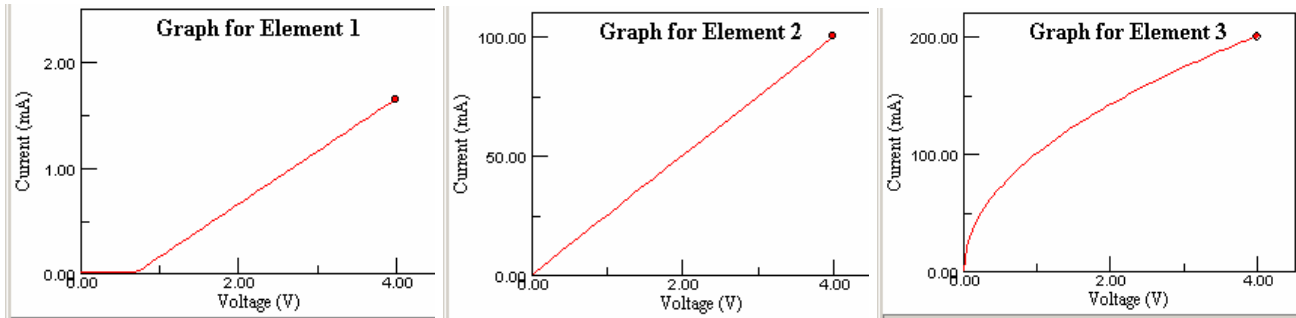


Student Name: _____

Partner _____

1. The graphs below are for circuit elements connected to a voltage source in a standard DC electrical circuit. The current through the element is measured on an Ammeter when the Voltage is changed. Which of the elements is an Ohmic device?



2. Estimate the resistance of a typical electrical cord in your home, say, one that attaches a lamp to the wall socket. Clearly list all variables and your estimated values for those variables.

HINT: ρ for copper = $1.69\text{E-}08$ ($\Omega \cdot \text{m}$) and $R = \rho L/A$. For household wire, $R = 2$ mm

3. Estimate the resistance of a typical US lightbulb. *Hint: You can use "typical" values for the voltage and power.*