## Ohm's Law

If you plot potential difference ( $\Delta \mathrm{V}$ ) vs. Current (I) on a graph, you will see a straight line that slopes upward.

Pot. Difference


Georg Ohm discovered this relationship in 1827 and is written mathematically as:

$$
\mathrm{R}=\frac{\Delta \mathrm{V}}{\mathrm{I}}
$$

Resistance can be calculated from the $\Delta \mathrm{V}$ vs. I graph above by calculating the slope (rise/run). The steeper the line of the graph, the greater the resistance.


This circuit has more resistance than the one graphed above. The line connecting the data points is steeper.

There are some sample calculations in the textbook for you to look at before you do your own problems.

Remember to use GRASP technique!
$\mathrm{G}=$ Givens
$R=$ Required (what am I required to solve for)
A = Analysis (formula I will use)
S = Solve
$\mathrm{P}=$ paraphrase (write a sentence answer)

