

Science 10

GRAPHING PRE-TEST

The following data was collected by measuring the amount of resistance in an electrical circuit as the amount of voltage was increased.

Voltage (V)	Resistance (Ω)
15	6
30	12
45	15
60	23
75	30
90	32
105	37
120	46
135	51
150	56

Graph the above data and answer the following questions. Remember to place the dependant and independent variables on the correct axis, label the axis correctly, use the correct scale (at least $\frac{1}{2}$ of the graph in both directions) with the correct units and supply the correct and complete title.

1. Which variable is the independent variable? _____
2. Which variable is the dependent variable? _____
3. When the voltage in the circuit is 0 volts, what should the resistance be? _____

Use the graph to estimate the answers to the following questions.

4. What would be the resistance when the voltage is 140 V?
5. What voltage would result in a resistance of 35 Ω ?