

MCAS OPEN RESPONSE #6: ELECTROMAGNETISM

In an experiment, the current is varied as it goes through the resistor in a circuit. An ammeter measures the current going through the resistor and a voltmeter measures the voltage across the resistor. The data are recorded and shown below.

**Circuit Data**

Current (A)	Voltage (V)
0.20	1.5
0.40	3.0
0.80	6.0
1.20	9.0
1.60	12.0
2.80	21.0

- Using the data in the table, make a graph of the voltage versus the current in the circuit. Voltage should be on the  $y$ -axis. Make sure the graph has clearly labeled axes and a proper scale.
- Find the slope of the graphed line. Show your calculations and include units in your answer.
- Explain what the slope represents.