

Ohm's Law Problems

Physical Science and Technology

Please solve these problems on your own paper. Show all your work for full credit. If you know the Five Steps, please use them!

1. A circuit with a resistance of 180 Ohms has a current of 0.015 A. What is the voltage driving the circuit?
2. A battery is powering a circuit that has a current of 15 A. The circuit has a resistance of 0.15 Ohms. What is the voltage of the battery?
3. A circuit that has a current of 0.4 A has a light bulb in it that provides a resistance of 0.75 Ohms. What is the voltage of the power supply for this circuit?
4. A circuit has three resistors in series (one right after the other): a 120 Ohm resistor, a 720 Ohm resistor, and a 1500 Ohm resistor. If the current in this circuit is 0.450 A, what is the voltage that is driving the circuit?
5. A circuit has a 0.450 Ohm resistor and a light bulb with a resistance of 0.100 Ohms. If the circuit has a current of 1.0 A, what is the voltage of the power supply for the circuit?
6. A 420 Ohm resistor is attached to a power supply with a voltage of 6.3 V. What will the current through the resistor be?
7. A 9 V battery is driving a circuit that is carrying a current of 0.075 A. What is the resistance of the circuit?