**Name:**

**Date:**

**School:**

**Facilitator:**

8.03 Ohm’s Law Calculations

**Complete the following 8 problems using Ohm’s Law to solve. Be sure to show your work. Use the equations editor in Microsoft Word or Pages to format the equations or hand write the answers and scan in your completed work.**

**Ohm’s Law Formula: I = V / R**

1. In an electrical field, the resistance is 2 Ω and the current is 4 A. What is the voltage?

1. How much current flows through a circuit in which the voltage is 9 V and the resistance is 3 Ω?

1. What is the resistance of a wire that has a voltage of 1.5 V and a current of 0.5 A?

1. Wire A has resistance of 3.0 Ω. Wire B has resistance of 2.5 Ω. Both wires have the same current. Which wire has greater voltage?

1. A refrigerator receives 240 V of electricity. If it uses 32 A of current, what is the resistance of the refrigerator?

1. Ellie has two wire circuits, each connected to its own 6 V battery. One circuit has a resistance of 0.80 Ω. The other circuit carries a 4.5 A current. Which circuit has greater resistance?

1. What is the current in an electric field in which voltage is 12 V and resistance is 1.5 Ω?

1. What is the voltage across a 75 Ω resistor with 1.5 A of current?