Ohm's Law Name:_____

$V = I \times R$ $I = Q / t$ $e^- = 1.6 \times 10^{-19} C$

Part I

A battery applies voltage across a resistor. The resulting current is **.02A**

1) What will be the new current in the resistor if the battery voltage is doubled?

Factor changed	new current

2) What will be the new current if the resistance is 1/5 as much?

Factor changed	new current

3) What will be the new current if the resistance is increased by two, and the voltage is reduced to 1/3 the original?

Factor changed	new current

Part II

4) In one minute, a battery is able to push .06C of charge through a wire. **a)**What is the resulting current? **b)**If this current were put through a 100 ohm resistor, what would be the applied voltage?

5) What is the resistance of a toaster if 110V produces a current of 4.2 A?

6) A 9.0 V battery is connected to a bulb whose resistance is 1.6 ohms. How many electrons leave the battery per minute?