**OHM'S LAW WORKSHEET**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***For each question please make sure that you follow proper math format.***

1. An Ipod uses a standard 1.5 V battery. How much resistance is in the circuit if it uses a current of 0.01 A?
2. What current flows through a hair dryer plugged into a 220 Volt circuit if it has a resistance of 50 ohms?
3. A 12 Volt car battery pushes charge through the headlight circuit resistance of 10 ohms. How much current is passing through the circuit?
4. An electric heater works by passing a current of 100A though a coiled metal wire, making it red hot. If the resistance of the wire is 2.2 ohms, what voltage must be applied to it?
5. A subwoofer needs a household voltage of 110 V to push a current of 5.5 A through its coil (circuit). What is the resistance of the subwoofer?
6. A light bulb has a resistance of 5 ohms and a maximum current of 10 A. How much voltage can be applied before the bulb will break?
7. An electric toaster is connected to a 220-V outlet in the kitchen. If the heating element in the toaster has a resistance of 28Ω, calculate the current flowing through it.
8. Calculate the voltage produced when 5, 1.5V batteries are combined in series? These are used to power a 10Ω light bulb. Draw a circuit diagram with a switch. What is the current flowing through the closed circuit?
9. Calculate the voltage produced when 5, 1.5V batteries are combined in parallel? These are used to power a 10Ω light bulb. Draw a circuit diagram with a switch. What is the current flowing through the closed circuit?
10. The current required to operate a coffee grinder is 2.4A. If the resistance is 100Ω, calculate the voltage drop.

Answers:

1. R = 150Ω
2. I = 4.4A
3. I = 1.2A
4. V = 220V
5. R = 20Ω
6. V = 50V
7. I = 8.6A
8. I = 0.75A
9. I = 0.15A
10. V = 240V