

**Ohm's Law worksheet**

Name \_\_\_\_\_ Per: \_\_\_\_\_

1. The rate of electron flow is measured in (a) amperes (b) volts (c) ohms.
2. Electric pressure (V) is measured in \_\_\_\_\_ (\_\_\_\_); the rate of electron flow (\_\_\_\_) is measured in amps (\_\_\_\_), the \_\_\_\_\_ (R) is measured in ohms (\_\_\_\_).
3. According to Ohm's Law, what effect will cutting the resistance have on the current?
4. In a circuit, voltage and current are (a) directly proportional, (b) inversely proportional, (c) not proportional.
5. Rearrange Ohm's Law to answer the following; Current equals \_\_\_\_\_ divided by \_\_\_\_\_.
6. If the power source is set at 6V and R is 2 ohms, the current = \_\_\_\_\_
7. V=5volts, R= 10 ohms, I= \_\_\_\_\_.
8. Voltage = \_\_\_\_\_ times \_\_\_\_\_.
9. If the voltage stays the same and the resistance is  $\frac{1}{4}$  of its original, what will happen to the current?
10. If the current in the circuit is 7 amps and the resistance is 2 ohms the voltage = \_\_\_\_\_.
11. R= 30 ohms, I= 3A, V= \_\_\_\_\_
12. Resistance = \_\_\_\_\_ divided by \_\_\_\_\_.
13. If the power source is 12 V and the flow of electrons is 3A, what is the resistance?
14. V= 6V, I= 18A, R= \_\_\_\_\_

Extension Questions:

15. A \_\_\_\_\_ is the electric pressure required to produce one ampere of current in a circuit having one \_\_\_\_\_ of resistance.
16. One amp is one \_\_\_\_\_ per second. A coulomb is \_\_\_\_\_ electrons.

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