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 _____Voltage_____ (__V__): the rate of electron flow (__Current (I)__) is measured in amps (__A__), the __Resistance__ (R) is measured in ohms (_Ω_).
3. According to Ohm's Law, what effect will cutting the resistance have on the current?
    a. Cutting the resistance will increase the current of a circuit
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 __Voltage__ divided by __Resistance__.
6. If the power source is set at 6V and R is 2 ohms, the current =_____3A_____
7. V=5volts, R= 10 ohms, I= _____.5A_____.
8. Voltage = _____I_____ times _____R_____.
9. If the voltage stays the same and the resistance is ¼ of its original, what will happen to the current?
    a. Current will increase by 4x
10. If the current in the circuit is 7 amps and the resistance is 2 ohms the voltage =_____14V_____.
11. R= 30 ohms, I= 3A, V=_____90V_____
12. Resistance = _____V_____ divided by _____I_____.
13. If the power source is 12 V and the flow of electrons is 3A, what is the resistance? 4Ω
14. V= 6V, I= 18A, R=_____.33Ω_____

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.