NAME: _____   DATE: _____

Worksheet 11a: Introduction to Ohm's Law
Directions: Rely on Ohm's Law (V=IR) to answer problems 1-16. Rely on your notes on circuits to answer the rest of the questions.

1. The rate of electron flow is measured in (a) amperes (b) volts (c) ohms.

2. If you increase amperage and maintain resistance, do volts go up or down?

3. A _____ is the electric pressure required to produce one ampere of current in a circuit having one _____ of resistance.

4. Electric pressure is measured in _____ (____): the rate of electron flow is measured in amps (_____), the _____ (R) is measured in ohms (_____).

5. In a circuit, voltage and current are (a) directly proportional, (b) inversely proportional, (c) not proportional.

6. According to Ohm's Law, what effect will cutting the resistance have on the current?

7. If the voltage stays the same and the resistance is ¼ of its original, what will happen to the current?

8. Using your equation for Ohm's Law, answer the following. Current equals _____ divided by _____.

9. If the power source is set at 6V and R is 2 ohms, the current =_____

10. V=5volts, R= 10 ohms, I= _____.

11. Voltage = _____ times_____.

12. If the current in the circuit is 7 amps and the resistance is 2 ohms the voltage =_____.

13. R = 30 ohms, I = 3A, V=_____

14. Resistance= _____ divided by _____.

15. If the power source is 12 V and the flow of electrons is 3A, what is the resistance?

16. V= 6V, I= 18A, R=_____

17. Draw the symbol for a DC power source (battery):

18. Draw the symbol for an AC power source (wall outlet):

19. Draw the symbol for a resistor and explain its effect on a circuit:

20. Draw the symbol for an open switch and explain its effect on a circuit:
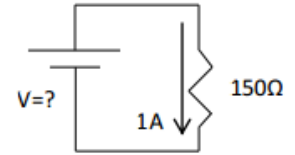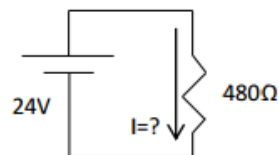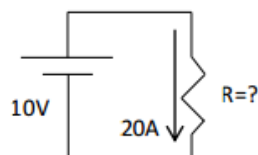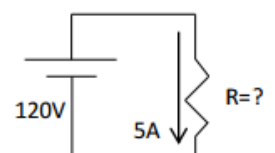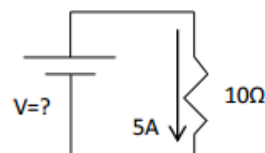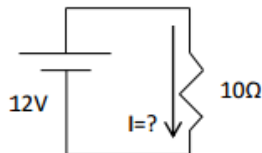
21. Draw the symbol for a closed switch and explain its effect on a circuit:

22. Draw the symbol for a capacitor and explain its effect on a circuit:

23. Draw the symbol for an inductor and explain its effect on a circuit:

24-29:

Solve for the unknown in each of these circuits

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