

1. State **Ohm's Law**: _____
2. Give the units for: V _____ ; I _____ ; R _____
3. Restate these units, using J, s, and/or c: V _____ ; I _____
4. State the **electric power formula**: _____
5. Give the unit: P _____ ; Restate, using J, s, and/or c: P _____
6. Another formula for calculating power is: $P =$

Rearrange the formula to solve for energy: $E =$
7. The kilowatt hour (kWh) is a unit for _____ which Power Companies sell to their customers. Why doesn't the power company use the MKS unit, watt second instead?

For these problems, show the formula used. Do your work on the back.

8. What is the resistance of an electric frying pan that draws 11 amps when connected to a 110 v circuit?
What is the power of the frying pan?
9. If a 120 v line to a socket is limited to 15 a by a fuse, will it operate a 1200 w dryer without blowing the fuse?
10. If the power company charges us 8 cents/ kw·h for electricity, what does it cost to operate the 1200 W hair dryer for 15 minutes?
11. If the power company sells electrical energy at 11 cents/kWh, how much does it cost to run a 100. W radio for 3.0 hours?
12. What is the resistance of a 150 W light bulb running on a 120 V circuit?

Do At Home: List the power rating on 5 electrical appliances in your home.