Electricity cost worksheet

Name_____

Purpose: Determine how much different appliances cost to run.

1. Find 4 objects beyond the 2 given that use electricity. Put them in the chart.
2. Use information given on the object or its power source to fill in some blanks.
3. Calculate the missing information using Ohm's or Watt's Laws.
4. Use $0.080 per Kilowatt-hour for the cost of electricity.

Object <u>60 w Light bulb</u>

Current =_____A

Voltage = _____120_____ V

Resistance = _____ ohms

Power = _____ watts = _____kilowatts

Cost to run for 24 hrs. = $_____

Object <u>200 w Refrigerator</u>

Current = _____A

Voltage = _____120_____V

Resistance = _____ohms

Power = _____watts =_____kilowatts

Cost to run for 24 hrs. = $_____

Object _____

Current =_____A

Voltage = _____V

Resistance = _____ ohms

Power = _____ watts = _____kilowatts

Cost to run for 24 hrs. = $_____

Object _____

Current = _____A

Voltage = _____V

Resistance = _____ohms

Power = _____watts =_____kilowatts

Cost to run for 24 hrs. = $_____

Object _____

Current =_____A

Voltage = _____ V

Resistance = _____ ohms

Power = _____ watts = _____kilowatts

Cost to run for 24 hrs. = $_____

Object _____

Current = _____A

Voltage = _____V

Resistance = _____ohms

Power = _____watts =_____kilowatts

Cost to run for 24 hrs. = $_____

1. Which object costs the most to run?

2. Why are the voltages the same on the objects?

3. How much does it cost to run a 60 W light bulb for 6 hours?

4. If the reading on your house's electric meter in March was 3456 and in April was 4566, how much electrical energy(in kW-hr and Joules) was used in the 1-month period?

5. How much would the electrical bill be for the people living in that house?

6. Find the cost to pop popcorn in a 1200-watt microwave oven, if you make microwave popcorn in 5 minutes.