APES Unit 1 Name:

Date:

Energy Conversions

Useful Equations:

Energy = Power x time

1. A 3,000-watt electric space heater was used for 4 hours How much energy did the heater use?
2. If a 120 watt light bulb has an efficiency of 10%, how many joules of light and how many joules of heat does it produce per second?
3. A home uses ten 100-watt light bulbs for two hours per day. Approximately how many kilo-watt hours of electrical energy are consumed in one year by using light bulbs?

4) Your refrigerator uses 500 watts when the motor is running. The motor runs for about 30 minutes per hour. How much energy does your refrigerator use in a year?

1. The best new refrigerator model uses 700 kwh per year. How does your refrigerator compare with the newer model?

6) A car uses 3,000 joules in 5 seconds. What is the power of the car?