Mr. Reznick's Kilowatt Caper

Electrical Energy is often measured in watts (W).

A kilowatt (kW) is equal to 1000 watts.

A kilowatt hour (kWh) is the total number of kilowatts used in one hour:
kWh = kW x time in hours.

For the following problems assume that electricity costs $ .10 per kWh.

Example: A washing machine uses 500 watts of power. If you wash clothes for one hour each day, how much will it cost to wash clothes for one week?

Solution: 500 W/1000 = .5 kW .5kW x 7 hours = 3.5 kWh 3.5 kWh x $ .10 = $ .35

Answer: $ 0.35 per week

Problem 1: For three days before Thanksgiving, Grandma spent 5 hours a day using her oven to bake all kinds of delicious food and treats. Her oven uses 10,000 watts. How much did the electricity cost for cooking Thanksgiving dinner?

Solution: _____

Problem 2: The Bat Cave uses one hundred 60 watt light bulbs. It is pretty dark in there, so the lights are on every day for 10 hours a day. How much money would Batman save in a year if he replaced all the light bulbs with 20 watt compact florescent bulbs.

Solution: _____

Problem 3: The PS2 uses 30 watts. The XBox 360 uses 165 watts. If you played each game system for 100 hours, how much more would the electricity cost to play the XBox 360?

Solution: _____

Problem 4: Jenna's Dad told her that she could spend the same amount money for the electricity to watch TV as she could for buying a Coke. If a Coke costs $ .50, and if Jenna's TV uses 100 watts of power, how many hours can Jenna watch TV?

Solution: _____