Efficiency and Kilowatt Hours

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_____ Date: _____

1. Your computer has a power rating of 400 W. It is left on all week. It costs \$ 0.08 per kilowatt hour. How much will it cost to have left your computer on?

2. A stove element uses 4.0 A of current from a wall voltage of 110 V. The stove will take 20 minutes to a pot of water to a boil. Electricity costs \$ 0.08 per kilowatt hour. How much will it cost to heat the pot of water?

3. If a light bulb uses 30 000 J of electrical energy and emits 900 J of light energy, what is the percent efficiency of the light bulb?

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4. An oven has a power rating of 7000 W. It cooked lasagna for 45 minutes. It took 15 789 000 J of energy to cook the lasagna. What is the efficiency of the oven?

5. Your stove has an efficiency of 20% and a power rating of 400 W. How long will it take to boil water if it requires 100 000 J of energy?

 A halogen bulb produces 300 J of light energy while using up 10 000 J of electrical energy. A fluorescent bulb uses the same amount of electrical energy but provides 1500 J of light energy. Compare their efficiencies.