Efficiency Power and Cost Practice Problems

You will need to refer to table 4.9 for power ratings

Formula Review:

Power	Efficiency	Cost
P = VI *Unit = Watt (or kilowatt)*	E = ** usually need E=Pt *Unit = %*	P x t x cost/kWh Unit = $

Power:

1. Calculate the power of a 120V drill that uses 15A of electricity.

2. Calculate the current required to run a got tub that requires 4800W of power and uses 240V of charge.

Efficiency:

1. Calculate the efficiency of a student whose brain produces 5J of thought from 100J of chemical energy on a Science 9 problem worksheet ☺☺.

2. Calculate the efficiency of a toaster that uses 6400 J of energy to create 4800J of heat energy.

Electrical Cost:

(for all problems, assume power costs $0.23/kWh)

1. A dishwasher requires 1200 W of power and is run 8 hours/week for a 30 day month. Calculate the cost of running it.

2.
3.
4. To cook a huge Christmas turkey an oven that uses 12 200 W of power is run for 7 hours. How much does it cost to cook the turkey?