9.3 Electrical Power & Energy Calculations

1. A microwave with a power rating of 1,200W is used for 30 minutes. How much electrical energy did the power company provide the microwave? (Hint: convert minutes to hours 1st)
2. The current in a phone is 5 A when plugged into a 120V outlet. What is the power of the phone?
3. A toaster is plugged into an outlet where the voltage difference is 120V. How much power does the toaster use if the current in it is 10A?
4. A DVD player that is not playing still uses 6.0W of power. What is the current into the player if it is plugged into a standard 120V outlet?
5. A flashlight’s bulb uses 2.4 W of power when the current in the bulb is 0.8A. What is the voltage difference supplied by the batteries?
6. A fridge operates on average for 10.0 hours a day. If the power rating of the fridge is 700W, how much electrical energy does the fridge use in one day?
7. A TV with a power rating of 200W used 0.8kWh of electrical energy in one day. For how many hours was the TV on during this day?
8. A hair dryer has a power of 1,200W. How much electrical energy does the hair dryer use in 3 minutes? (Hint: convert minutes to hours 1st )