

PHYSICS-2

Elementary Physics of Energy

Homework 2

Due Date: APRIL 20, 2012 in class

1. A typical clothes dryer uses 5 kW of power when it is running. If it takes about 1 hr to dry a load of clothes, and your house does about 15 loads each month, about how much does this cost on your pg&e bill if:

- a. it's an electric dryer?
- b. it runs on natural gas?

Hint: current Santa Cruz energy charge rates can be found on your PG&E bill.

2. A person consumes 2000 Calories and this energy is equivalent to raising the temperature of an amount of water equal to their mass by 50 degrees F, what is the mass of this person in kg?

Questions from Chapter 2 of Ristinen and Kraushaar:

3. Problem 2. page 59
4. Problem 4. page 59
5. Problem 5. page 59
6. Problem 7. page 59
7. Problem 8. page 60
8. Problem 11. page 60

Multiple Choice Questions from Chapter 2:

1. Problem 2.
2. Problem 4.
3. Problem 5.
4. Problem 6.
5. Problem 9.