Practice Solutions....

a) find the mechanical energy input to the generator.

The equation to remember is

Input = Output + Changes

Here we don't know the input.
The output is 7.87 + 0.03 (= 7.90)
The changes are 0.04

so Input = 7.90 + 0.04 = 7.94

b) fine the electrical energy input to the buzzer

There are two ways to figure this out.

Way #1
The electrical energy comes from the generator and goes to both the buzzer and the bulb. We know how much leaves the generator (7.87) and we know how much the bulb gets (2.1). The buzzer gets the rest. So

buzzer electrical energy input = electrical output from generator - electrical input to bulb
= 7.87 - 2.1
= 5.77

Way #2
We can use the energy equation again:

Input = Output + Changes

We are looking for the input to the buzzer
The output is 1.14 + 4.52 = 5.66
The changes are 0.04 + 0.08 = 0.12

so Input = 5.66 + 0.12 = 5.78

You will notice that the answers are off by 0.01, but remember that, because of rounding errors with the simulator, that is really OK. Answers that differ by only 0.01 are considered the same.

c) Find the heat energy output from the bulb

Again, you will want the energy equation

Input = Output + Changes.

The input is 2.1
The output is ? + 0.42
The changes are 0.02

So we have

$2.1 = ? + 0.42 + 0.02$
or $2.1 = ? + 0.44$

so $? = 2.1 - 0.44 = 1.66$

so the heat energy output from the bulb is 1.66