1   Many household electrical devices have a 'standby' mode. This means that the appliance is in a state of low power consumption while not in use.

Three devices are in standby mode.

Appliance	Standby power in watts
Television	5
Computer	5
CD player	4

1 (a) (i)   A homeowner goes away for a trip and is away for a total of 40 hours. Calculate the energy wasted, in kilowatt-hours by leaving all the appliances on standby mode for 40 hours.

Use the correct equation from the equation sheet.   **[2 marks]**

40 x 14 [1] = 560   *Remember to divide your answer by 1000 to get kWh.*

Energy wasted =   0.560   [2]   kWh

1 (a) (ii)   The cost of electricity is 11p per kilo-watt hour.

Calculate the cost of leaving the appliances on for 40 hours.   **[1 mark]**

You can still get this mark if you got 1 (a) (i) wrong but multiplied your answer by 11.

Cost = 6.16 p or 6.2 p [1]

1 (b)   Here is some data about the television while switched on.

Power	200 watts
Efficiency	80%
Usage per day	1 hour

The cost of electricity is 11p per unit.

Calculate the cost of watching the television over a time period of 1 week (7 days).

[3 marks]

200 x 1 x 7 = 1400 [1]

1.4 x 11p [1]

Always show working. Remember to divide by 1000 to get to kilo-watt hours.

Cost = 15.4 p or 15 p [3]

1 (b) (i) Calculate the cost of the energy wasted by the television over 1 week.   **[2 marks]**

0.80 x 1.54 - 1.54 or 0.20 x 1.54 [1]

You can still get this mark if you got 1 (b) wrong but calculated 20% correctly.

Cost = £0.308p or 0.31 p [2]

1 (b) (ii) What happens to the wasted energy?   **[1 mark]**

Transferred to the surroundings. [1]

(Total 9 marks)

End