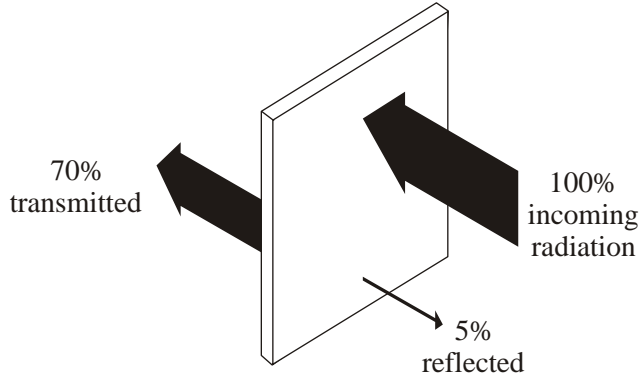


Infra red radiation

1. (a) Infra red radiation can be reflected, absorbed and transmitted by glass.



(i) What percentage of infra red is absorbed by the glass?

.....

(1)

(ii) Complete the following sentence by drawing a ring around the correct word or phrase.

The absorbed infra red

increases
does not change
decreases

 the temperature of the glass.

(1)

(b) **Two** of the following statements are true. **One** of the statements is false.

Tick (✓) the boxes next to the **two** true statements.

All objects absorb infra red radiation.	
Black surfaces are poor emitters of infra red radiation.	
A hot object emits more infra red than a cooler object.	

(1)

(c) The following statement is false.

Black surfaces are good reflectors of infra red radiation.

Change **one** word in this statement to make it true.

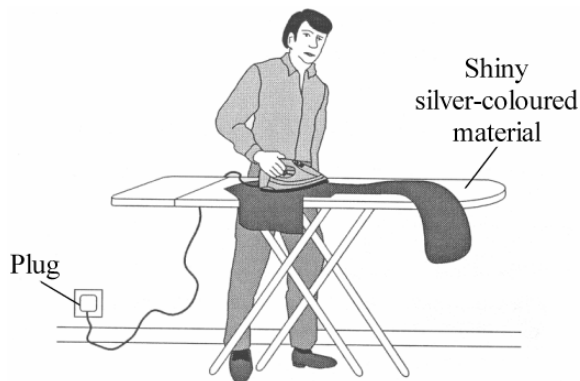
Write down your **new** statement.

.....

(1)

(Total 4 marks)

2. The drawing shows someone ironing a shirt. The top of the ironing board is covered in a shiny silver-coloured material.



Explain why the shiny silver-coloured material helps to make ironing easier.

.....

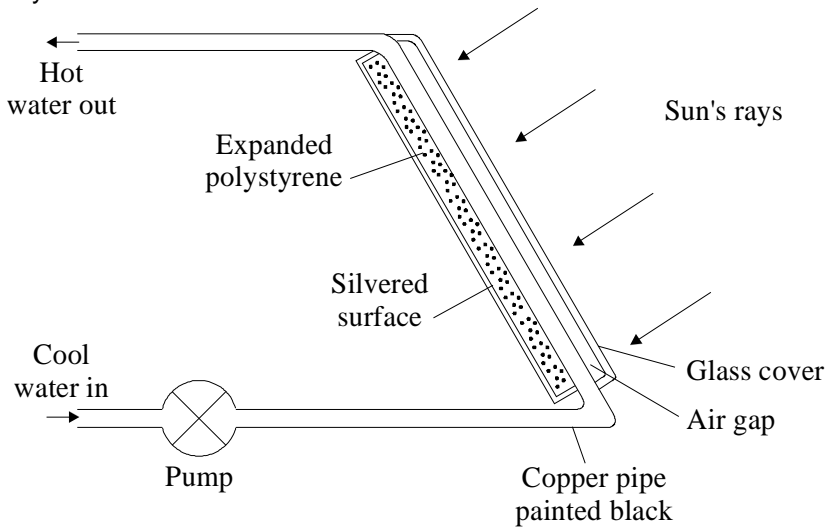
.....

.....

.....

(Total 2 marks)

3. The diagram shows part of a solar water heater. Water circulating through the solar panel is heated by the Sun.



- (i) Complete the following sentence.

Heat energy is transferred from the Sun to the solar panel by

(1)

- (ii) The pipe inside the solar panel is black. Why?

.....

(1)

- (iv) A silvered surface is used at the back of the solar panel. Explain why.

.....

(2)

(Total 4 marks)