

6 (a) A student wants to find the refractive index of a glass block.

- (i) Draw a diagram to show how the student should set up the apparatus needed to find the refractive index of a glass block.

Label your diagram.

(2)

- (ii) What measurements should the student take to find the refractive index of the glass block?

(2)

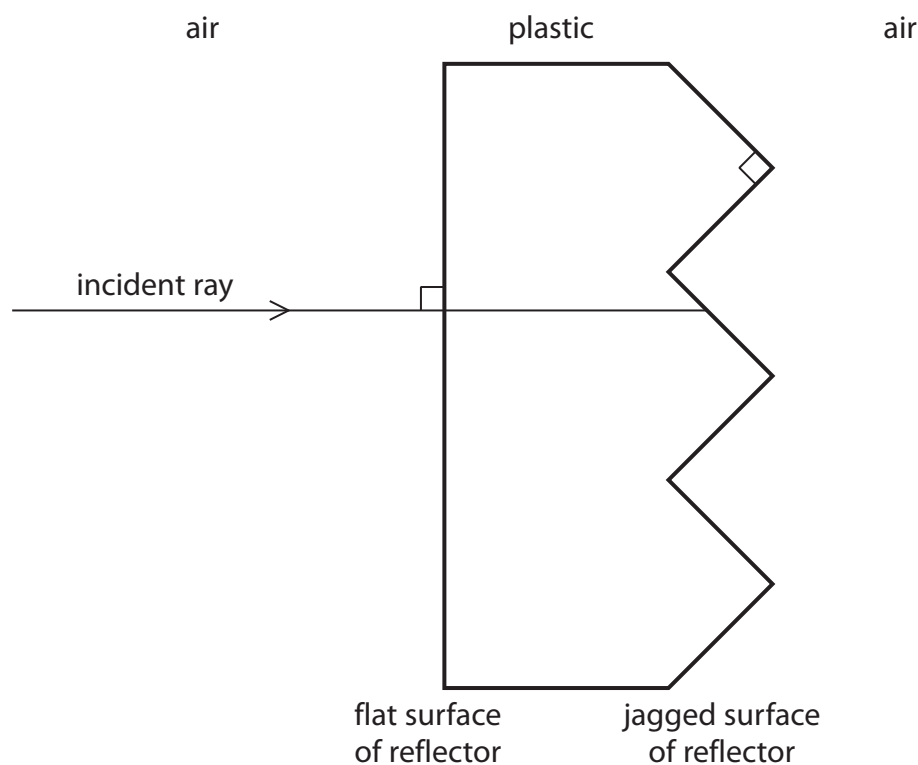
- (iii) Describe how the student should use these measurements to find the refractive index of the glass block.

(2)



(b) The diagram shows a section through a bicycle reflector.

A ray of light is incident on the flat surface of the reflector.



- (i) The critical angle for the plastic of the reflector is less than 45° .

Continue the incident ray on the diagram to show the path of the ray until it emerges from the plastic.

(2)

- (ii) What happens to the incident ray as it enters the plastic?

(1)

(Total for Question 6 = 9 marks)

