11 Binoculars are used to look at distant objects.
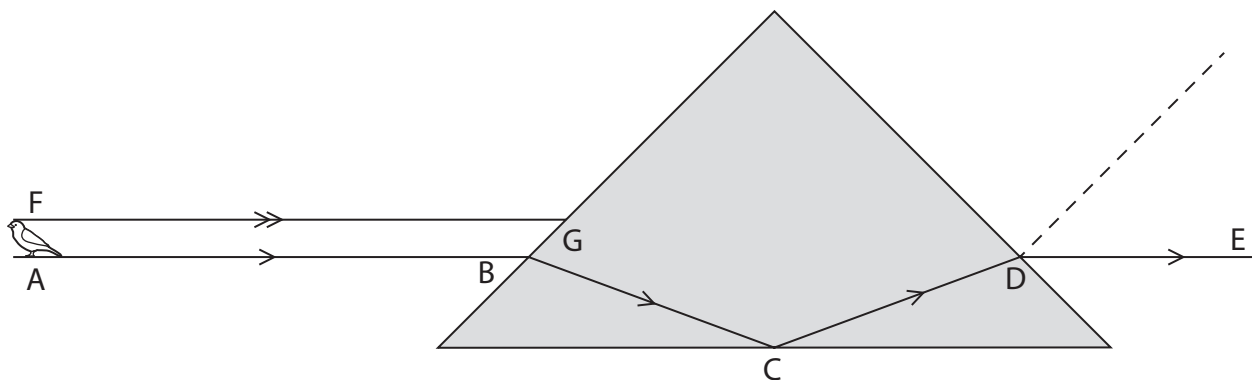

binoculars

Many binoculars use right-angled prisms.

The diagram shows two parallel rays of light, AB and FG, from a distant bird, incident on a right-angled prism.

(a) (i) On the diagram, draw the normal at G.

(1)

(ii) Measure the angle of incidence at G and the angle of refraction at D.

(2)

angle of incidence at G = ...

angle of refraction at D = ...

(b) Explain what happens to the light ray at C.

(3)

....

....

....

....

....

....

(c) Complete the diagram by drawing the path that light ray FG takes through the prism.

(3)

(Total for Question 11 = 9 marks)