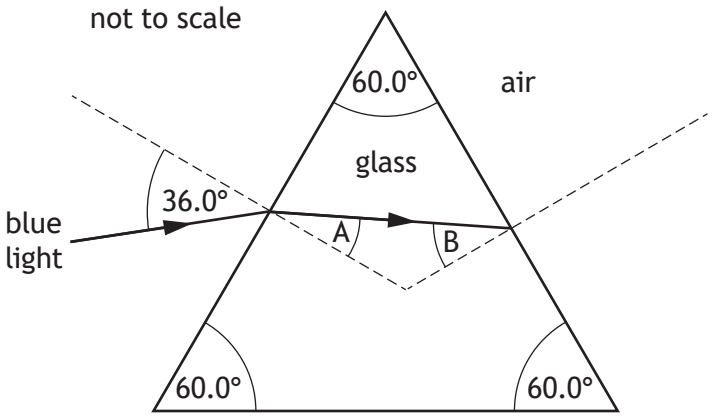
11. A ray of blue light is incident on a triangular glass prism as shown.



The refractive index of the glass for this blue light is 1.53.

(a) (i) Calculate angle A. **3**

Space for working and answer

(ii) Determine angle B. **2**

Space for working and answer

11. (continued)

(b) (i) State what is meant by the term *critical angle*. **1**

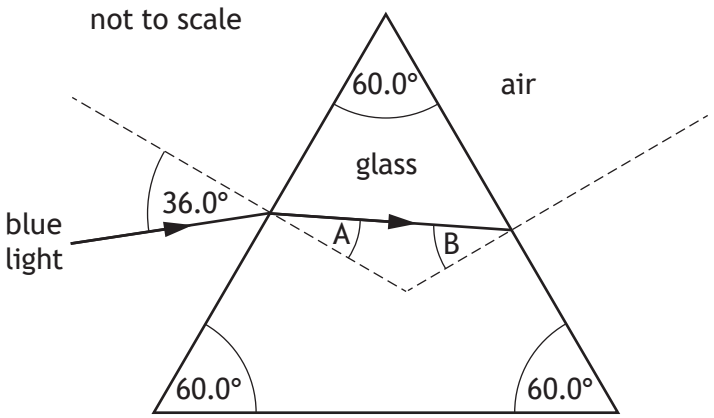
(ii) Calculate the critical angle for this blue light in the glass prism. **3**

Space for working and answer

(c) Complete the diagram below to show the path of the ray after it is incident on the glass-air boundary at the right-hand side of the prism.

Mark on the diagram the value of the angle between this ray and the normal after it is incident on this glass-air boundary. **3**

(An additional diagram, if required, can be found on *page 43*.)



[Turn over