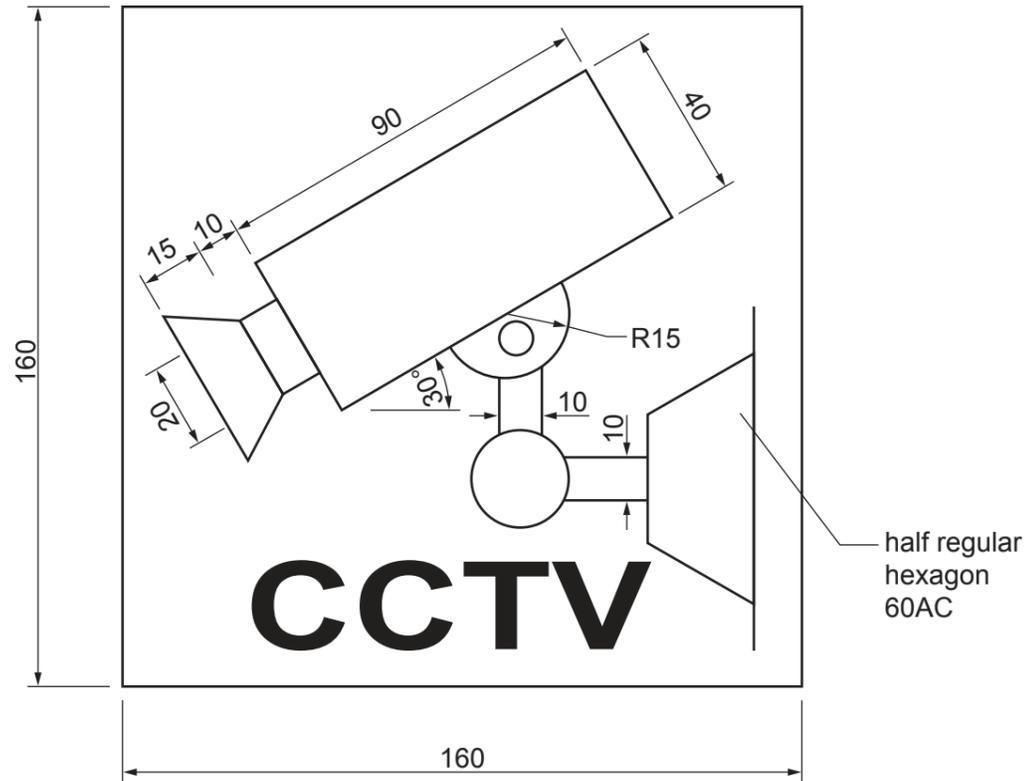


Section A

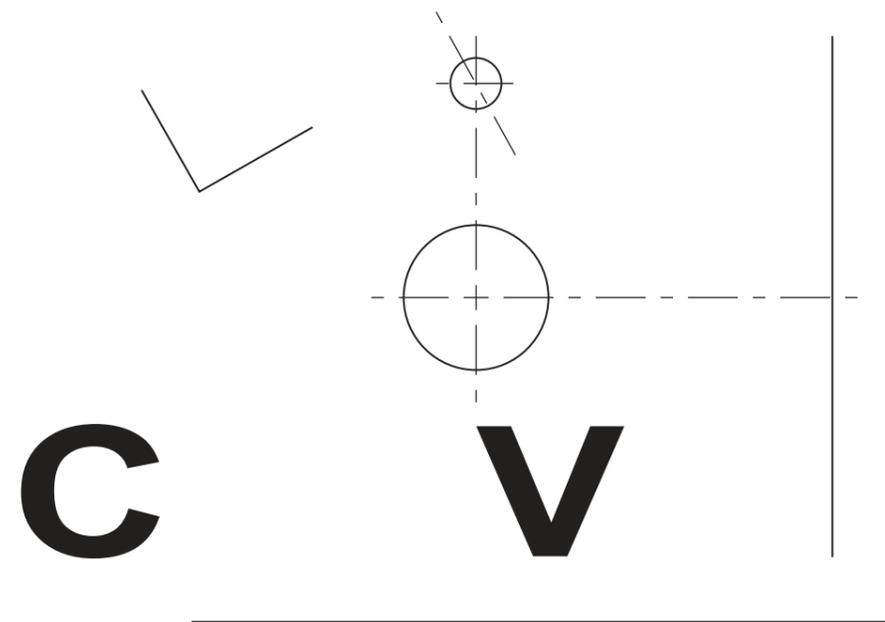
Answer **all** questions in this section.

A1 A warning sign is shown below.



Complete the full-size drawing of the warning sign in the space provided to the right by adding:

- (a) the outer square [1]
- (b) the half hexagon [3]
- (c) the camera [4]
- (d) the bracket arm [4]
- (e) the missing letters of CCTV. [2]



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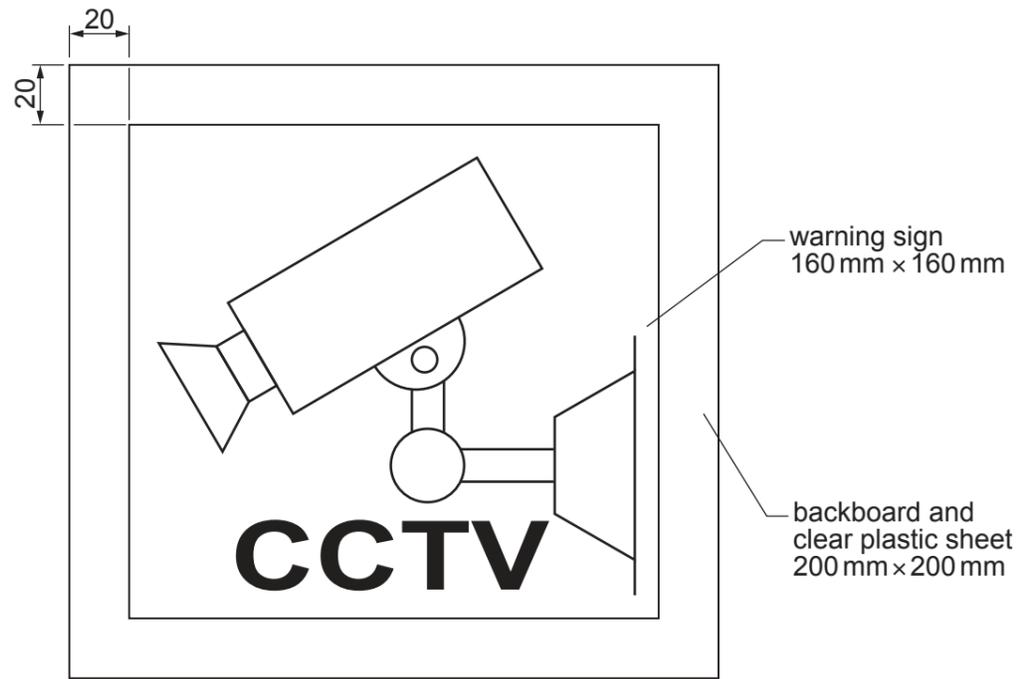
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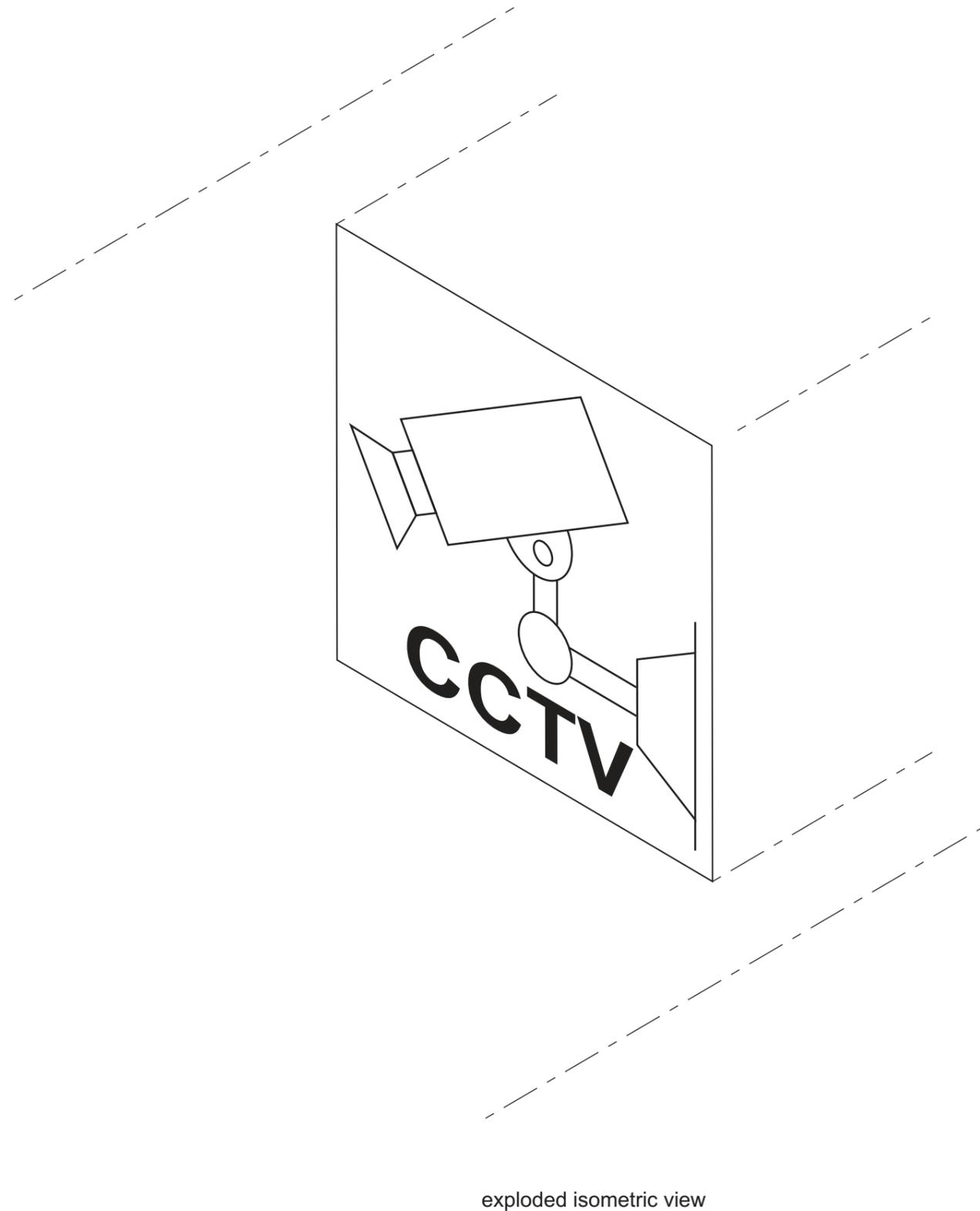
A2 The warning sign will be mounted to a 20 mm thick MDF backboard and covered in a thin clear plastic sheet.

The MDF backboard and clear plastic sheet are 40 mm wider and 40 mm taller than the warning sign to create a 20 mm border around the edge of the sign.



Complete the exploded isometric view of the sign parts to a scale of 1:2 by adding:

- (a) the 20 mm thick MDF backboard [5]
- (b) the thin clear plastic front sheet. [4]



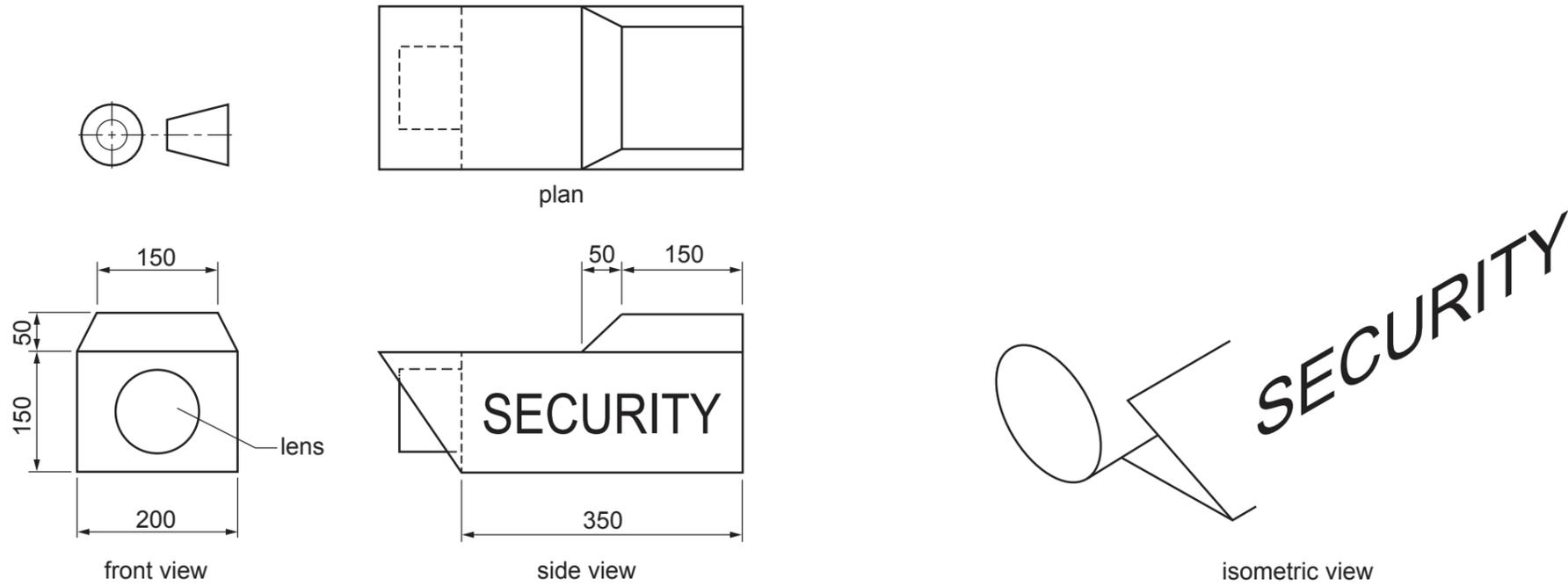
A3 The warning sign will be made from card and produced in quantities of 10 000.

- (a) State **one** suitable printing method for the card warning sign.
..... [1]
- (b) Name a suitable clear plastic sheet for covering the card warning sign.
..... [1]

Section B

Answer **one** question, **either** Question **B4** or **B5**, from this section.

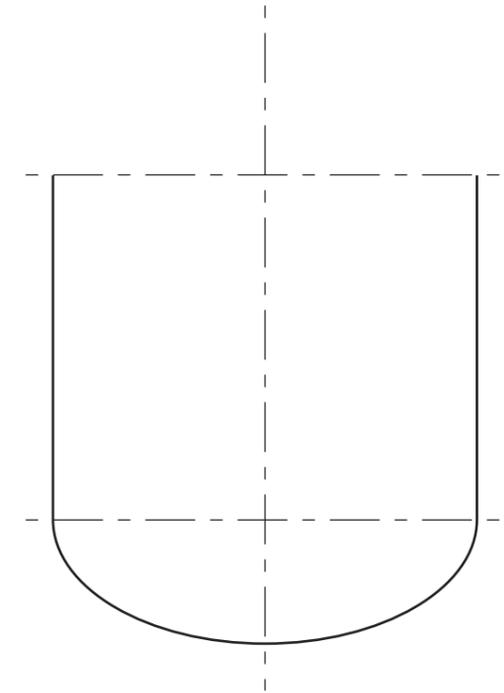
B4 Orthographic views of a model of a security camera are shown below.



(a) Complete the isometric view of the model to a scale of 1:5. [12]

(b) The model of the security camera is made from Styrofoam blocks.

Complete the drawing of the Styrofoam block used to make the lens by drawing the top ellipse. Major axis 60 mm, Minor axis 36 mm. [6]



(c) The SECURITY lettering on the side of the model is to be made from self-adhesive vinyl.

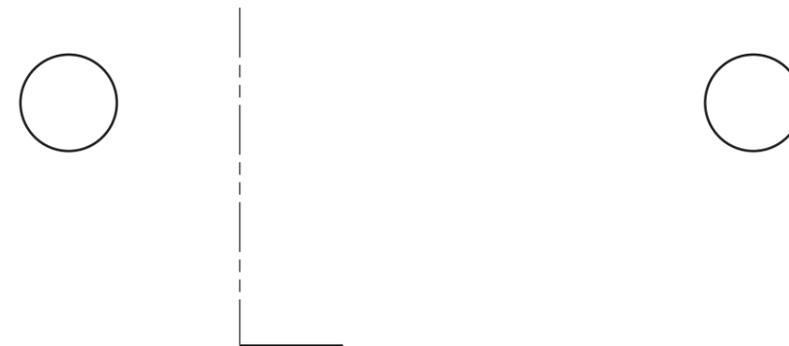
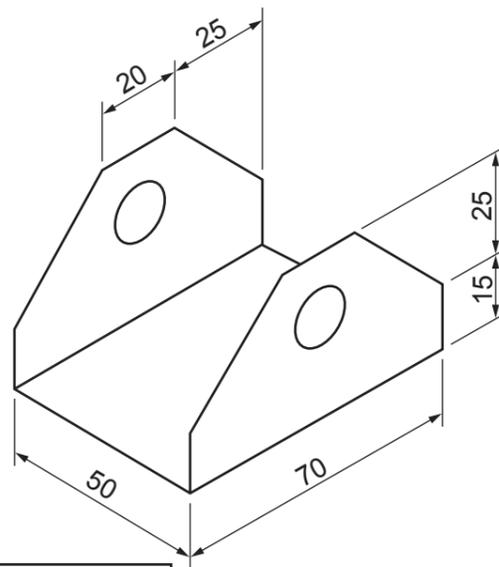
Describe how CAD/CAM could be used to produce the lettering.

.....

 [3]

(d) A cardboard bracket for the model of the security camera is shown below.

Complete the full-size development (net) of the cardboard bracket. [4]



development (net)

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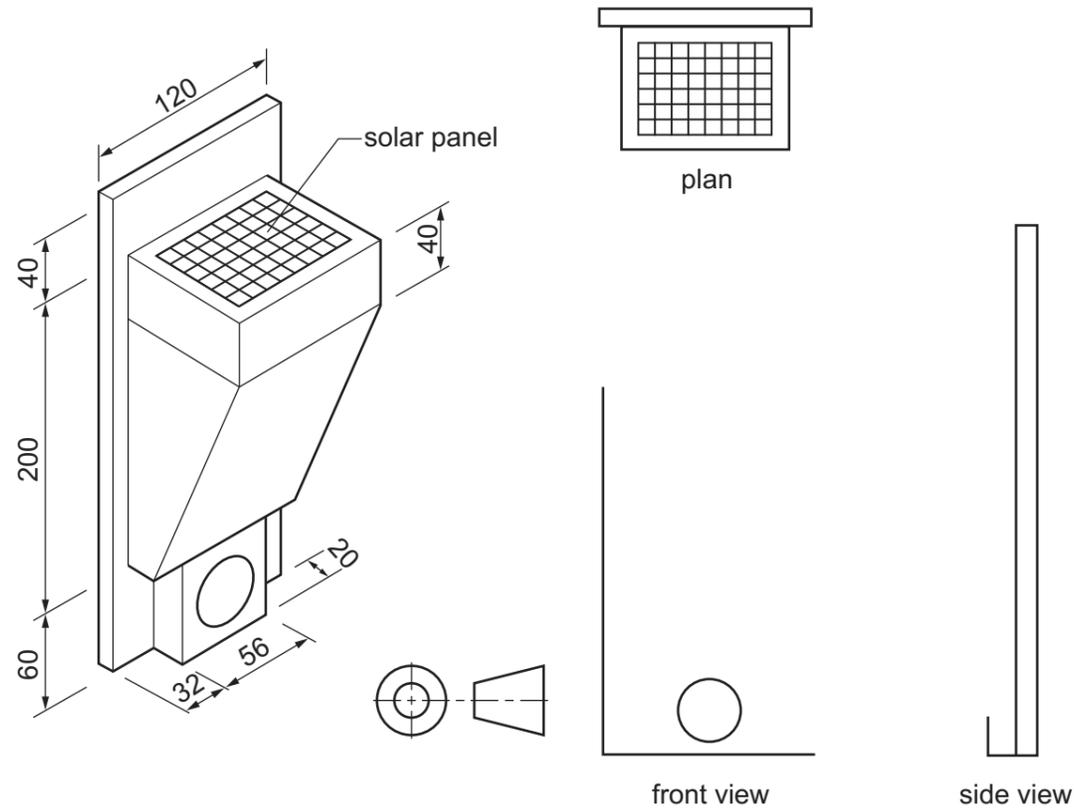
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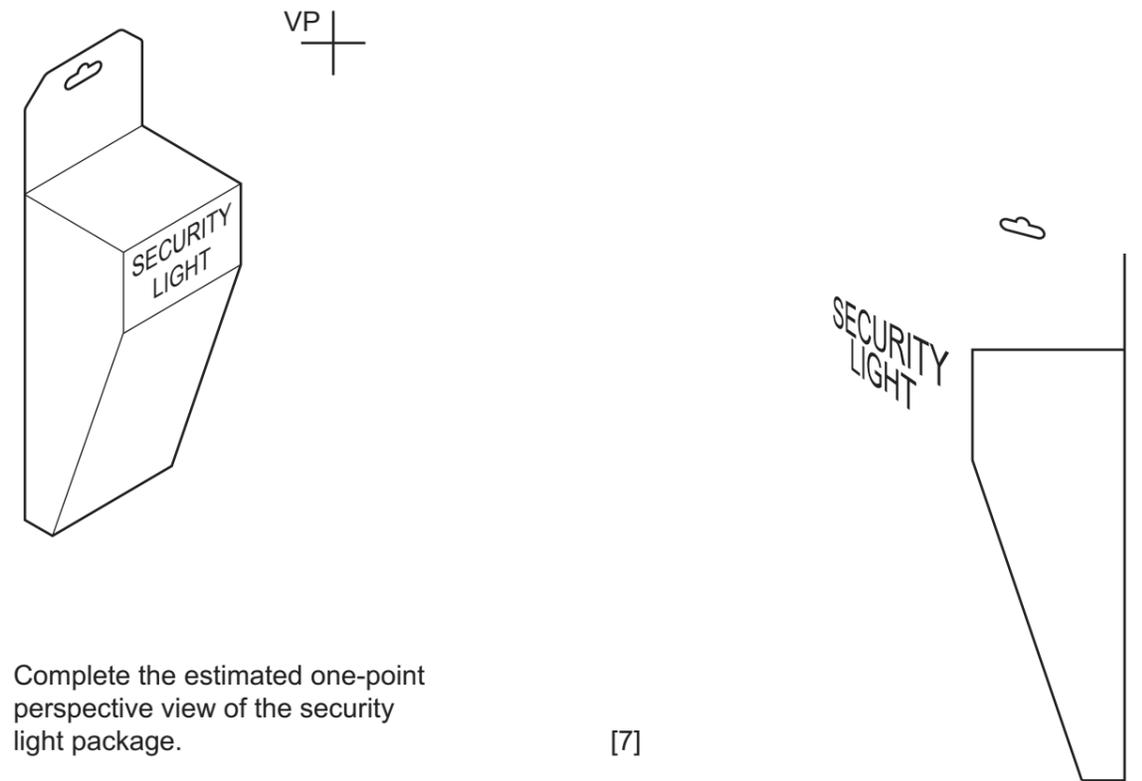
[Turn over]

B5 A security light is shown below.



(a) Complete the orthographic views of the security light to a scale of 1:4. [11]

(b) A package for the security light is shown below.



Complete the estimated one-point perspective view of the security light package.

[7]

estimated one-point perspective view

(c) A symbol is needed for the security light package. The symbol must show that the security light must **not** be placed in a recycling bin.

Sketch a design for the symbol in the space below. [3]

(d) The symbol shown below will also be printed on the security light package.



State the meaning of the symbol.

.....
 [1]

(e) In use, the security light only turns on when it is dark **and** it senses movement.

Once the light turns on, it stays on for 2 minutes and then turns off again.

Complete the flowchart of the security light operation.

[3]

