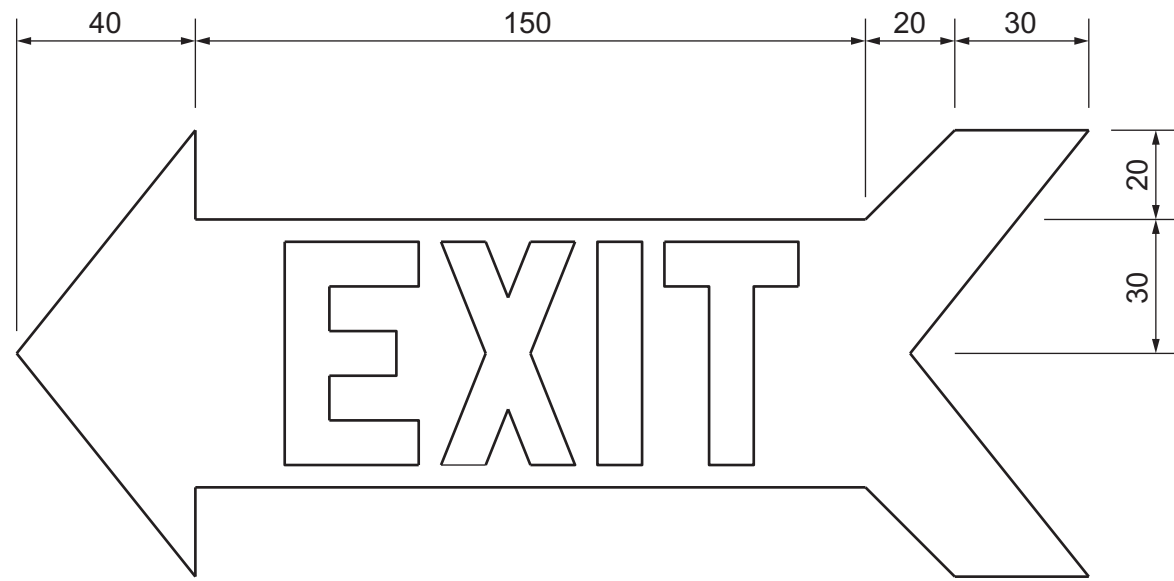


**Section A**

Answer **all** questions in this section.

An exit sign is shown below. The sign is made from 6 mm thick acrylic.

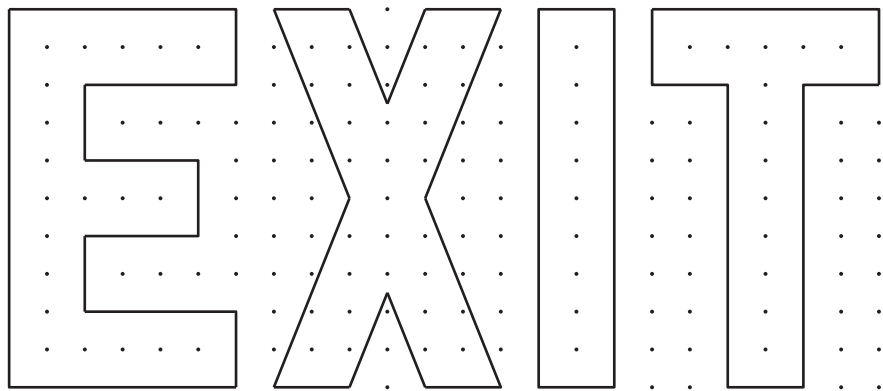


**A1** Complete the full size isometric view of the exit sign in the space provided to the right by drawing:

- (a) the outer shape of the sign [7]
- (b) the thickness of the sign. [2]

**A2** The EXIT lettering is shown on the grid below. The dots on the grid are 5 mm apart.

Complete the EXIT sign by adding the missing letters on the isometric view. [2]

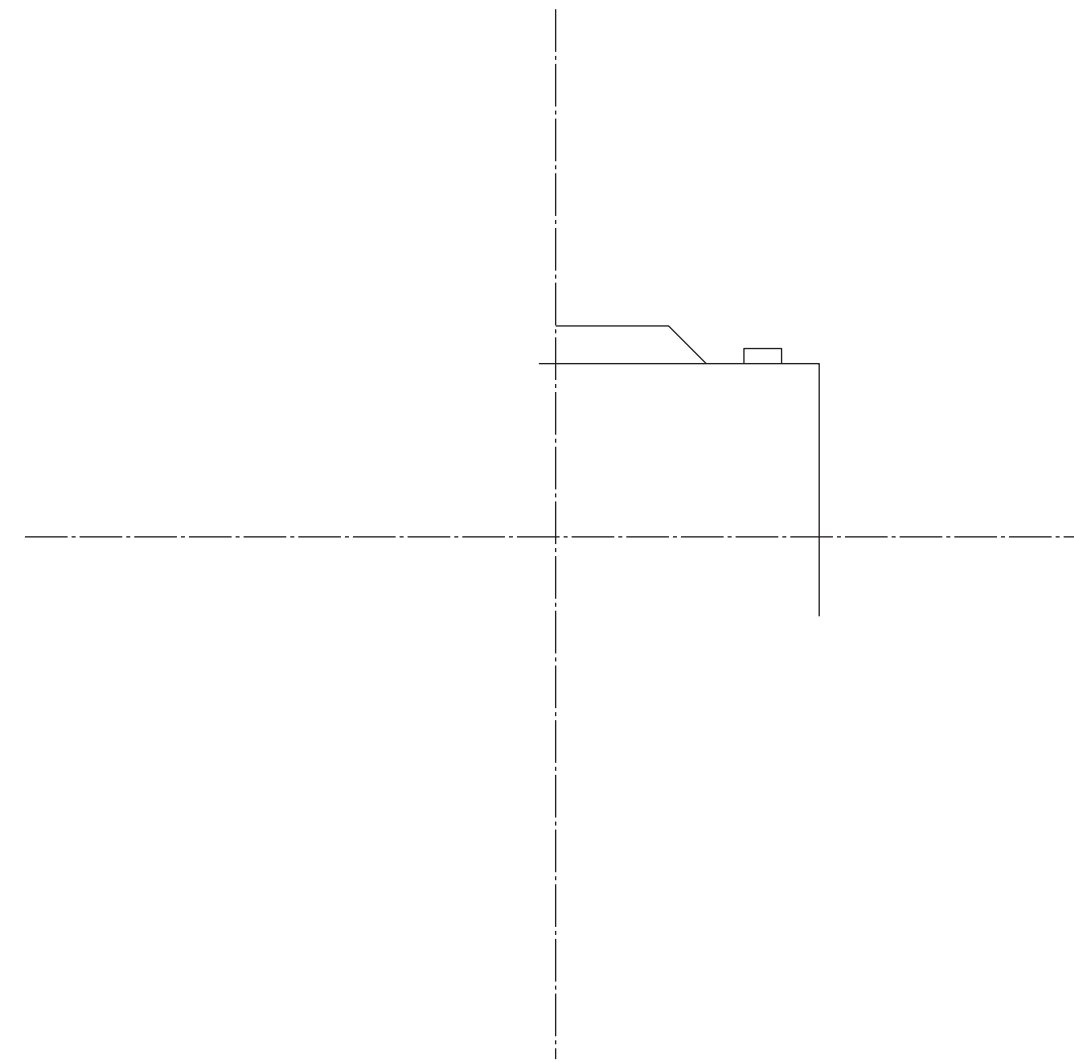
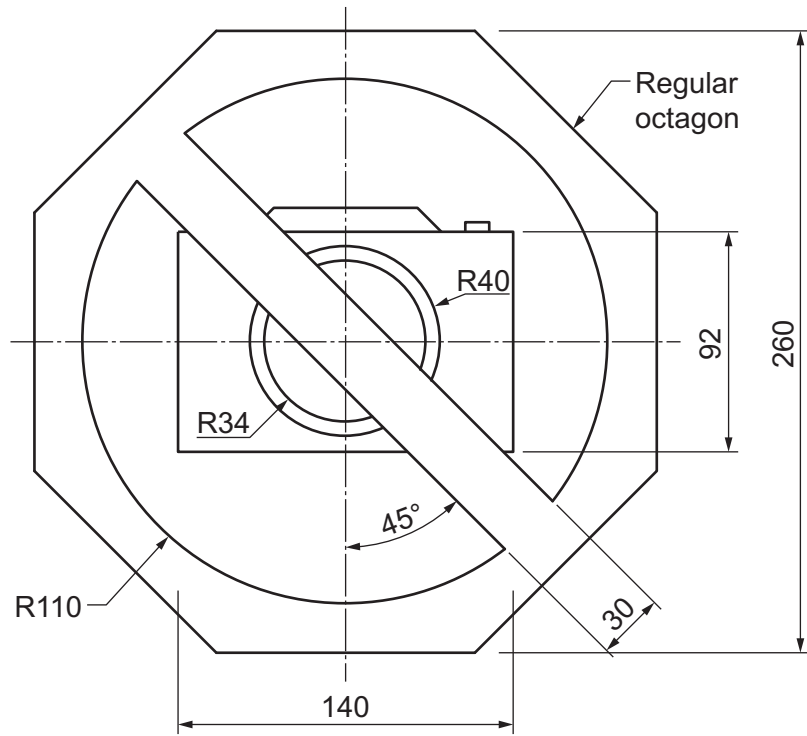


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|                          |
|--------------------------|
| For<br>Examiner's<br>use |
|                          |
|                          |
|                          |
|                          |

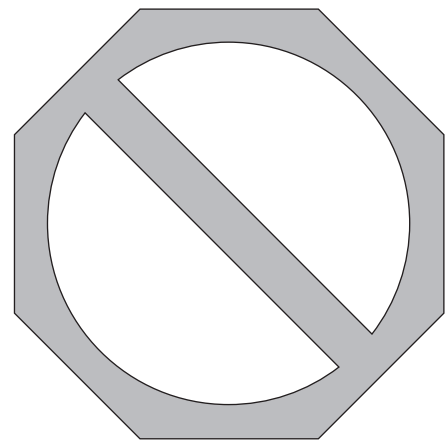
**A3** A sign forbidding the taking of photographs is shown below.



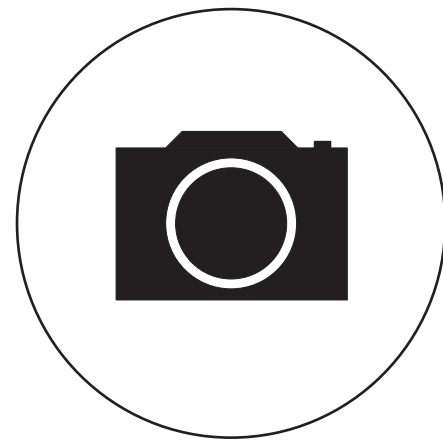
(a) Complete the half size view of the sign in the space provided to the right by drawing:

- (i) the outer border with diagonal bar [6]
- (ii) the camera image. [4]

The sign will be made in two parts as shown below.



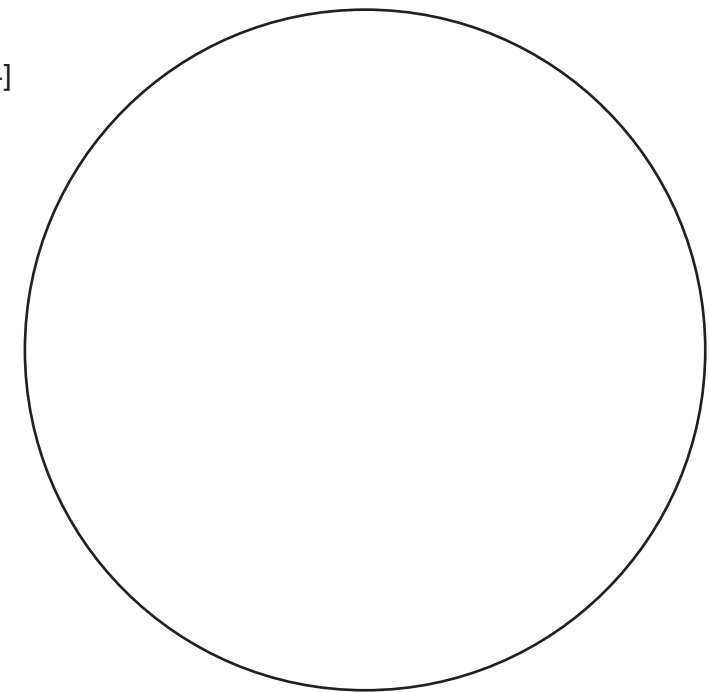
**Part A:**  
The outer border with diagonal bar is made from 3 mm thick red acrylic and goes in front of the backboard.



**Part B:**  
The backboard has a black image on white 3 mm thick acrylic and goes behind Part A.

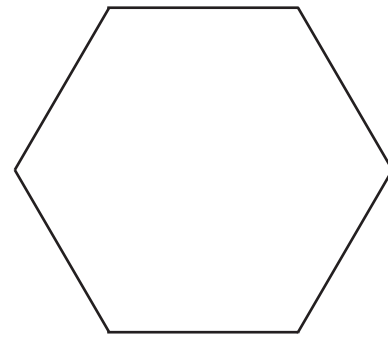
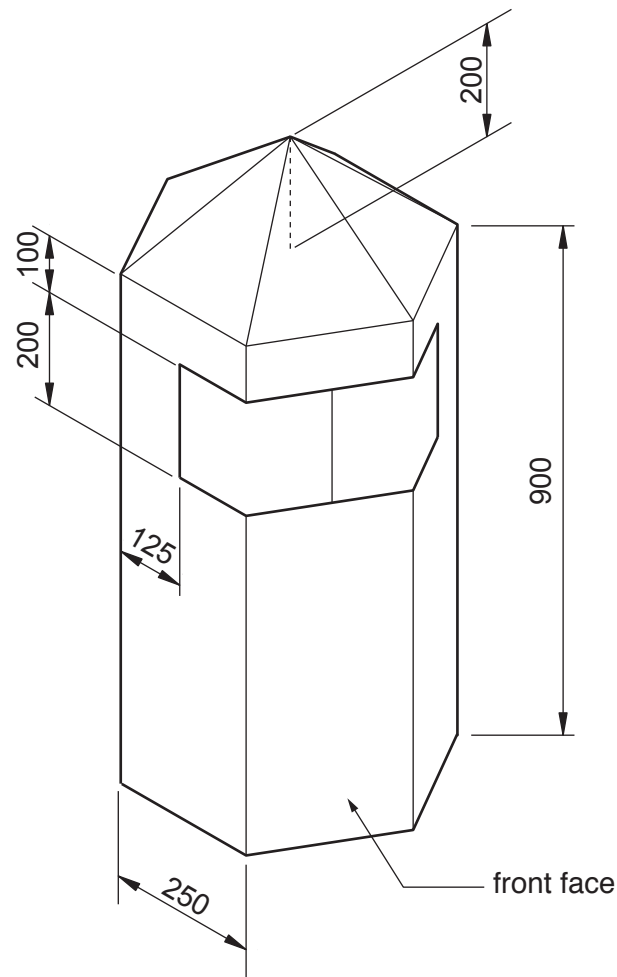
(b) Another backboard is needed for a 'NO FOOD OR DRINK' sign.

Design a suitable image for the backboard in the circle provided. [4]

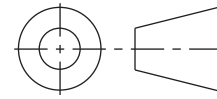


**Section B**  
Answer **either** question **B4** or **B5**.

**B4** An isometric view of a litter bin is shown below.



plan



side view

(a) Complete the orthographic views of the litter bin to a scale of 1:10. [13]

front view

(c) The image to the right has been produced using Computer Aided Design (CAD).

(i) State **two** advantages of using CAD to produce the image.

- 1 .....
- 2 ..... [2]

(ii) A vinyl self-adhesive sticker of the image is to be made using Computer Aided Manufacturing (CAM).

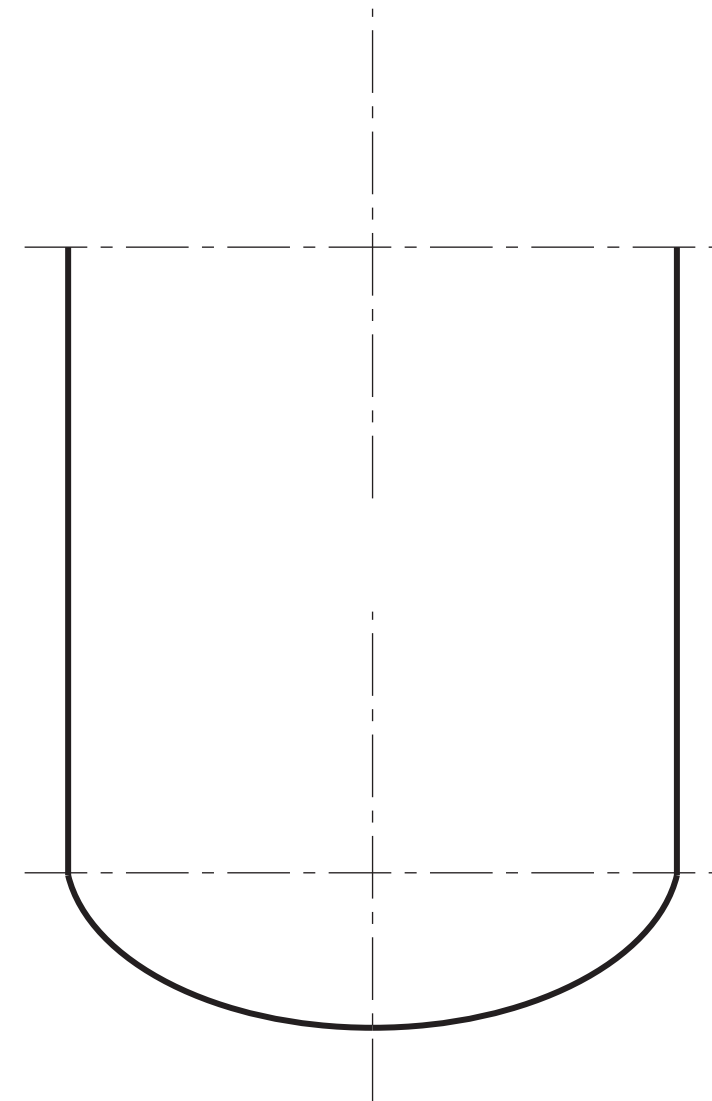
State **one** suitable CAM machine for making the sticker.

..... [1]



(b) The litter bin has a cylindrical steel liner inside which can be removed when emptying the bin.

Complete the pictorial view of the liner below by adding the top ellipse. [7]



(iii) The manufactured sticker is to be positioned on the **front face** of the litter bin below the opening.

State the maximum width & height of the sticker so that it can fit into the space available.

Width .....

Height ..... [2]

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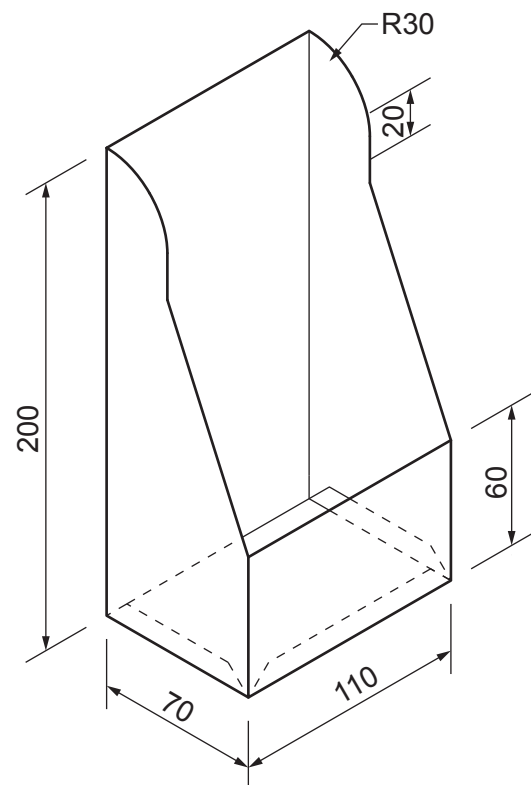
Candidate Number .....

Candidate Surname .....

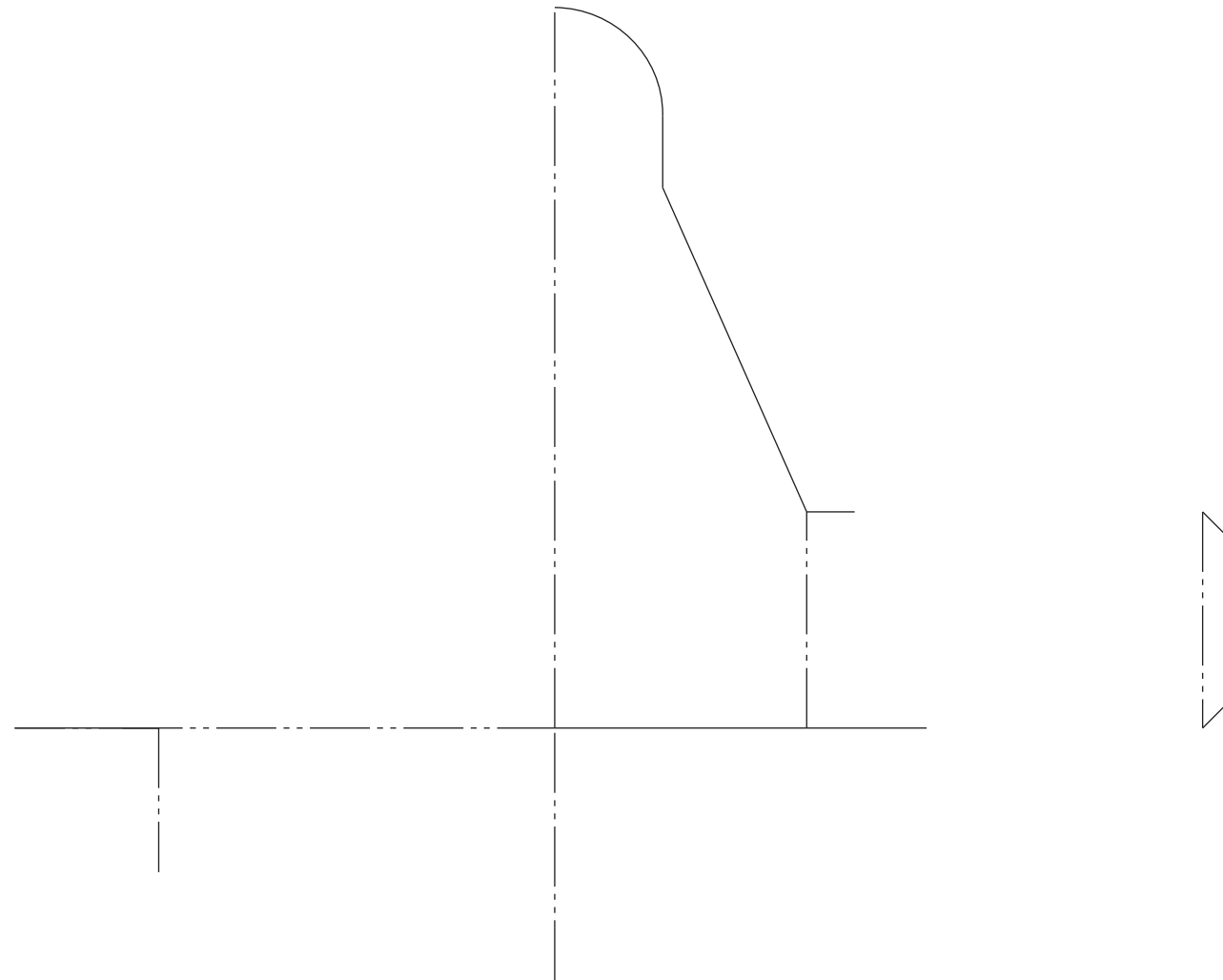
Other Names .....

**[Turn over]**

**B5** A cardboard leaflet holder is shown below.



(a) Complete the development (net) of the leaflet holder to a scale of 1:2. [10]



(b) Complete the table below to show **one** tool or item of equipment you would use to produce a prototype of the leaflet development (net).

| Process                                   | Tool/item of equipment |
|---|------------------------|
| Marking out the development (net) on card |                        |
| Scoring the fold lines                    |                        |
| Cutting out the development (net)         |                        |

[3]

(c) The leaflet holders are to be produced in quantities of 5 000.

(i) State a suitable adhesive for joining the development (net) together.

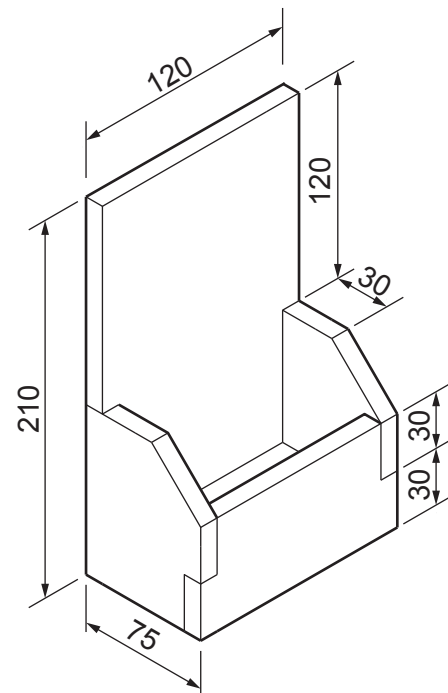
..... [1]

(ii) Explain **one** advantage of using a die cutter to manufacture the developments (nets).

.....  
 .....  
 ..... [2]

Another leaflet holder is shown to the right.

The leaflet holder is made from 15mm thick MDF.



(d) To a scale of 1:3, complete the table by drawing the parts needed to make the leaflet holder. [9]

| Base | Sides × 2 | Back | Front |
|------|-----------|------|-------|
|      |           |      |       |