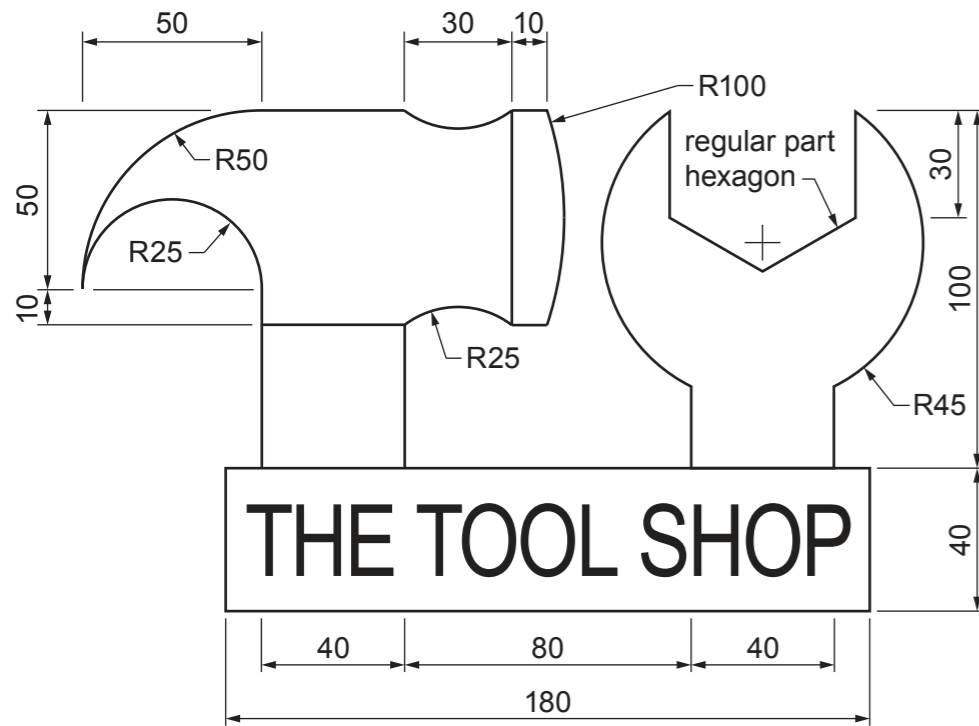


Section A

Answer **all** questions in this section.

A1 A logo for a tool shop is shown below.



Complete the full size view of the tool shop logo in the space provided to the right by drawing:

- (a) the outer shape of the rectangle [2]
- (b) the claw hammer shape [7]
- (c) the spanner shape. [5]

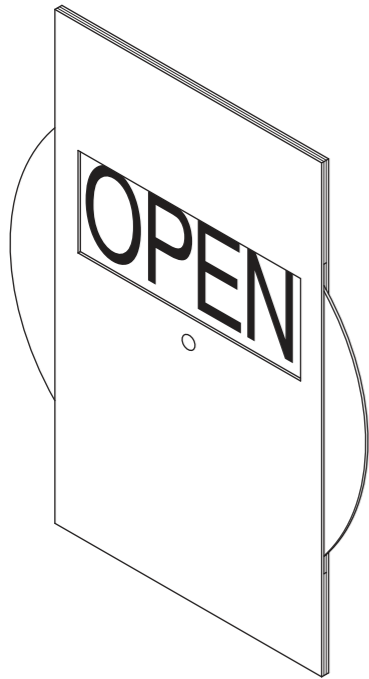
THE TOOL SHOP

0445/52 May/June 2020 **1 hour**
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Centre Number Candidate Number Candidate Surname Other Names **[Turn over**

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A2 A rotating open/closed sign for the shop is shown below.



Front piece	Spacers
Rotating wheel	Back piece

The sign is made from the five pieces of 1 mm cardboard shown in the table.

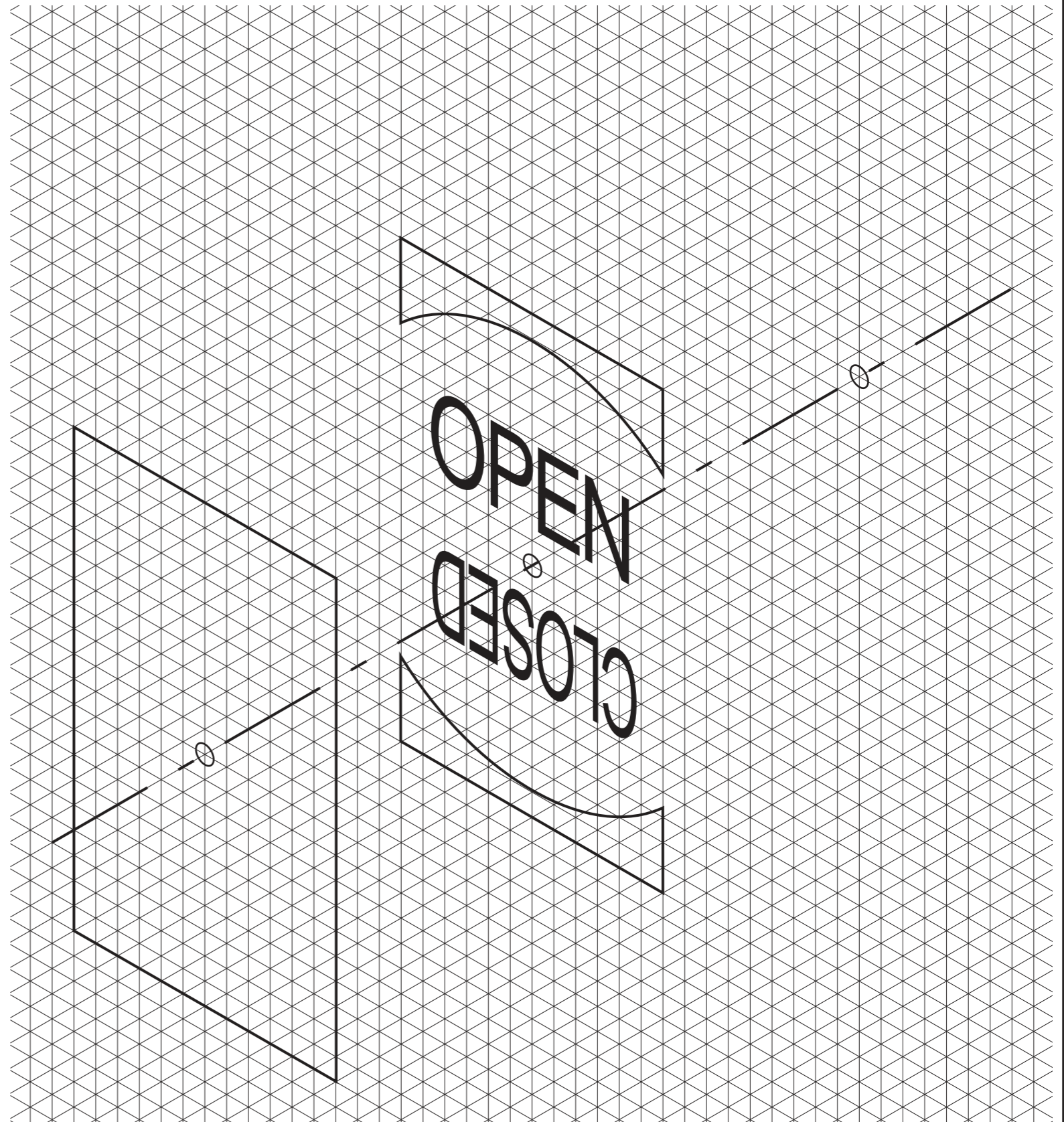
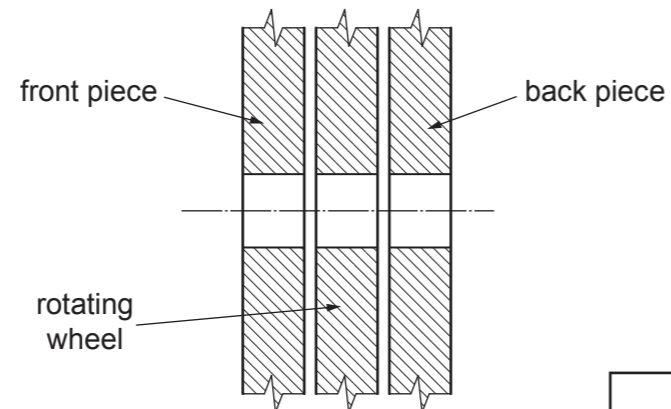
Complete the exploded view of the rotating shop sign by adding:

- (a) the rectangular hole in the front piece [2]
- (b) the rotating wheel [4]
- (c) the back piece. [2]

Ignore the thickness of the material.

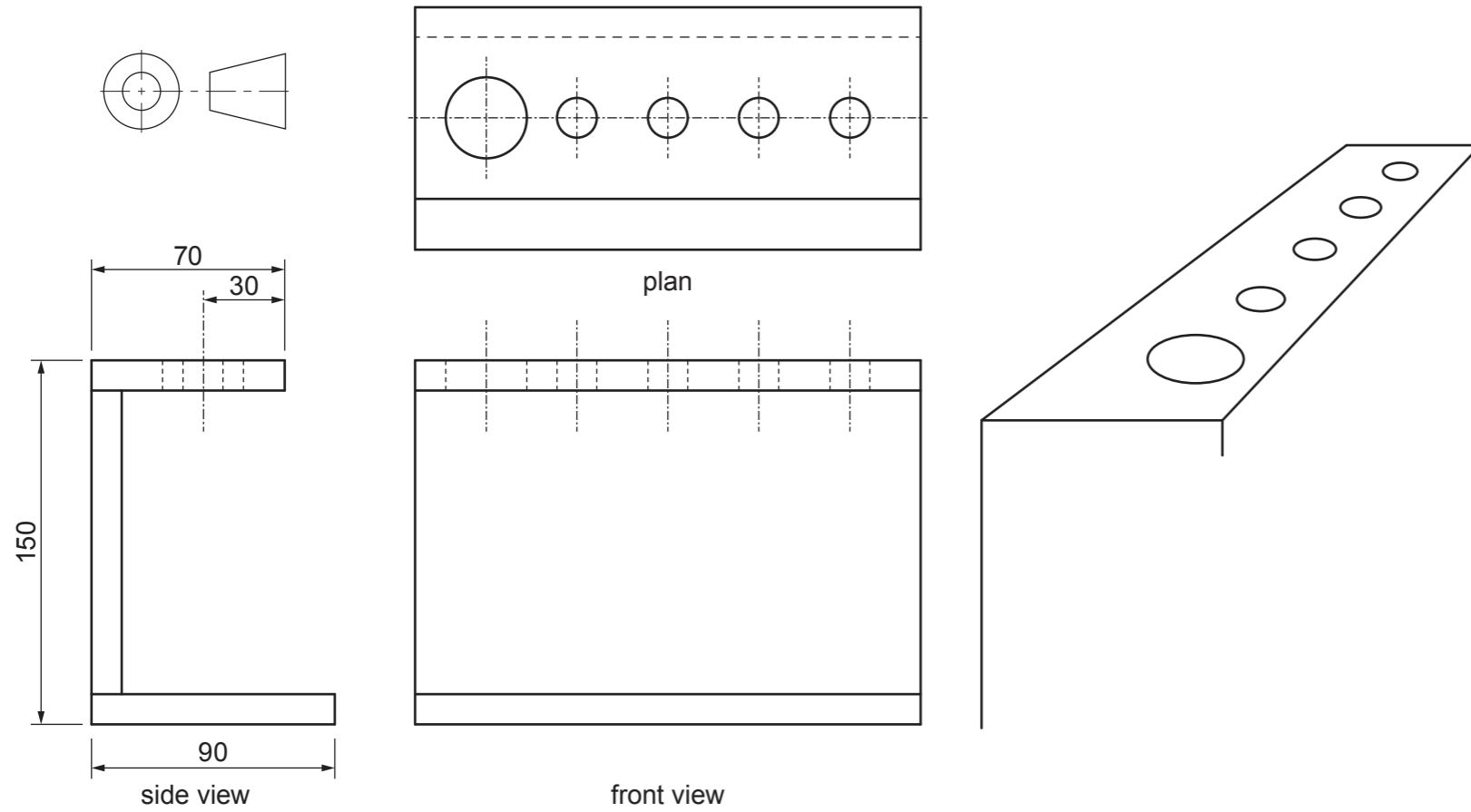
A3 A split pin is inserted through the centre of the sign to fasten the parts together and allow the wheel to rotate.

Complete the sectional view by adding the split pin. [3]



Section B
Answer either question B4 or B5.

B4 Orthographic views of a tool rack are shown below.
The tool rack is made from 10 mm thick softwood.



(a) Complete the single point perspective view of the tool rack to a scale of 1: 2. [13]

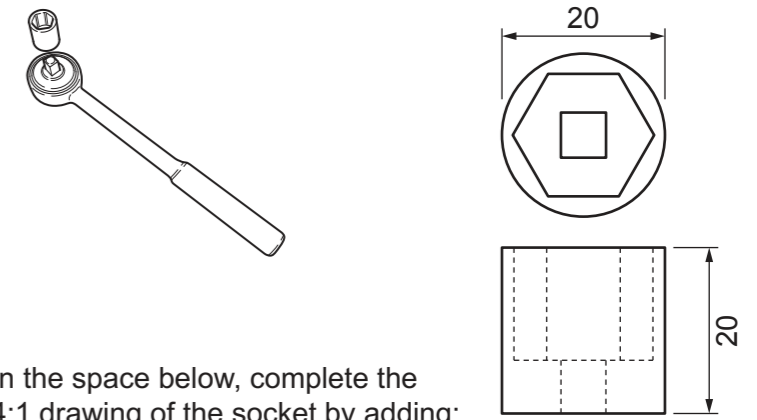
(c) The table below shows the sales of the most popular tools in a shop over one month.

Tool	Spanners	Screwdrivers	Hammers	Pliers
Number Sold	42	53	15	37

In the space to the right draw a bar chart to show the sales of each tool. [5]

VP

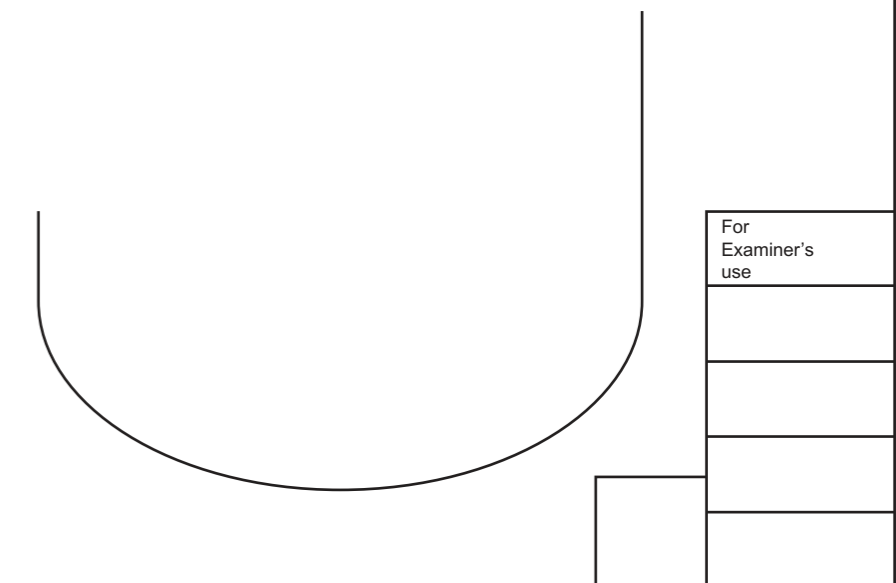
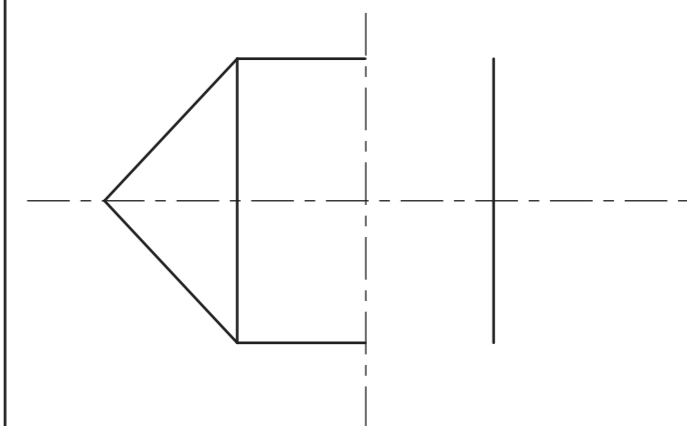
(b) Orthographic views of a socket spanner are shown below.



In the space below, complete the 4:1 drawing of the socket by adding:

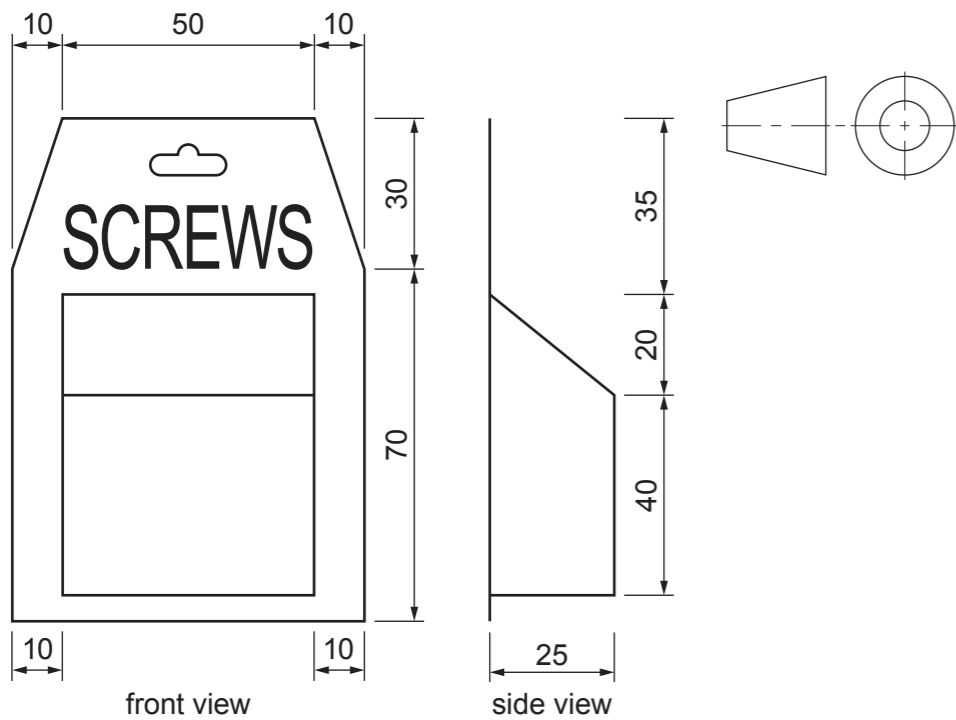
- (i) the right-hand half of the hexagon [1]
- (ii) the sides of the socket spanner [1]
- (iii) the top ellipse. [5]

Ignore hidden detail.



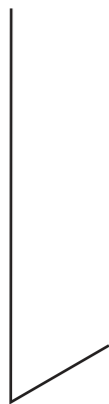
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B5 Orthographic views of a blister pack for screws are shown below.



(a) Complete the full size isometric view of the blister pack below. [12]

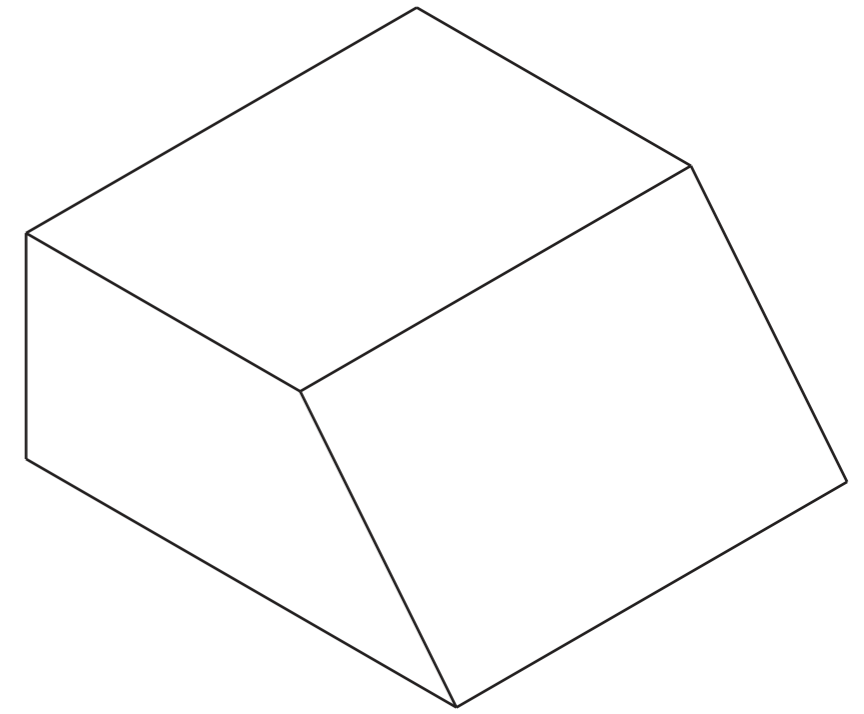

SCREWS



(b) The mould for vacuum forming the blister is shown to the right.

Add sketches and notes to show:

- (i) **two** different modifications to the mould that would make it easier to remove from the blister after vacuum forming [4]
- (ii) a modification to the mould that would help prevent air pockets and ensure the blister has good definition and shape. [2]



(c) The blisters are to be vacuum formed in thin clear plastic, before being trimmed to size and glued to the backboard.

Complete the table below to show **one** safety precaution for each stage in the making process.

Process	Safety precaution
Vacuum forming the plastic blister.
Trimming the plastic blister to size with a craft knife.
Gluing the plastic blister to the backboard with contact adhesive.

[3]

(d) The blister packs are to be mass produced in quantities of 5000.

State **one** suitable commercial process that could be used to:

- (i) cut out the card backboards
..... [1]
- (ii) print the SCREWS lettering onto the backboards.
..... [1]

(e) The symbol below is to be printed onto the blister pack.

Explain **one** benefit of using symbols on products instead of written instructions.



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