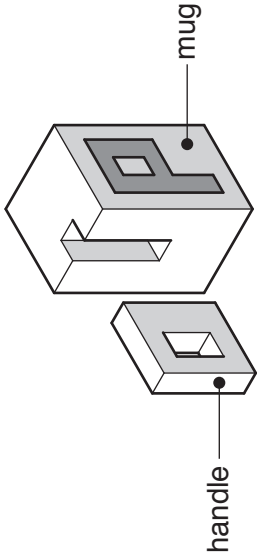


Section A

Answer question A1.

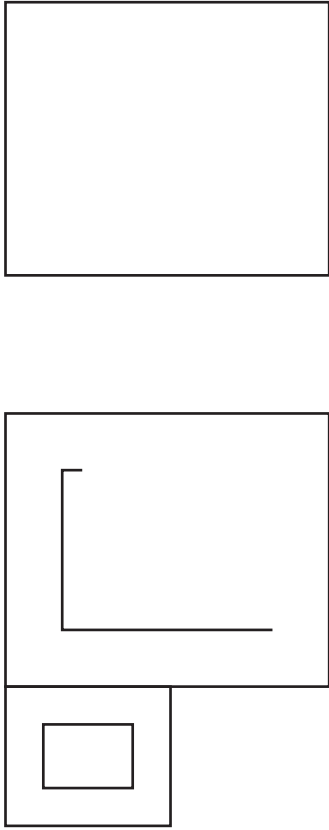
A1 A model of a mug is shown on the right. The model is made from two blocks of Styrofoam.



(a) Complete the orthographic views below of the fully assembled model of the mug by:

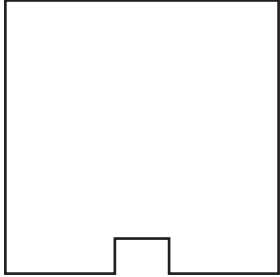
- (i) completing the letter P on the side view; [3]
- (ii) adding the handle to the end view; [4]
- (iii) adding the handle to the plan view. [2]

Show hidden detail on all views.

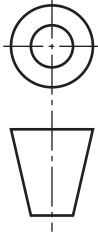


side view

end view



plan view

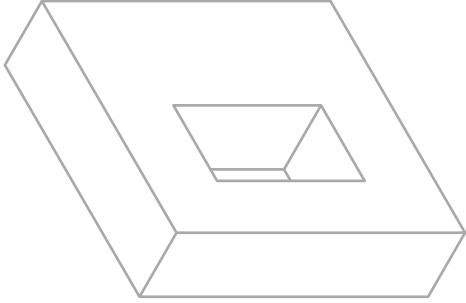


(b) Name **two** pieces of equipment used to accurately draw the letter P on the Styrofoam model.

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

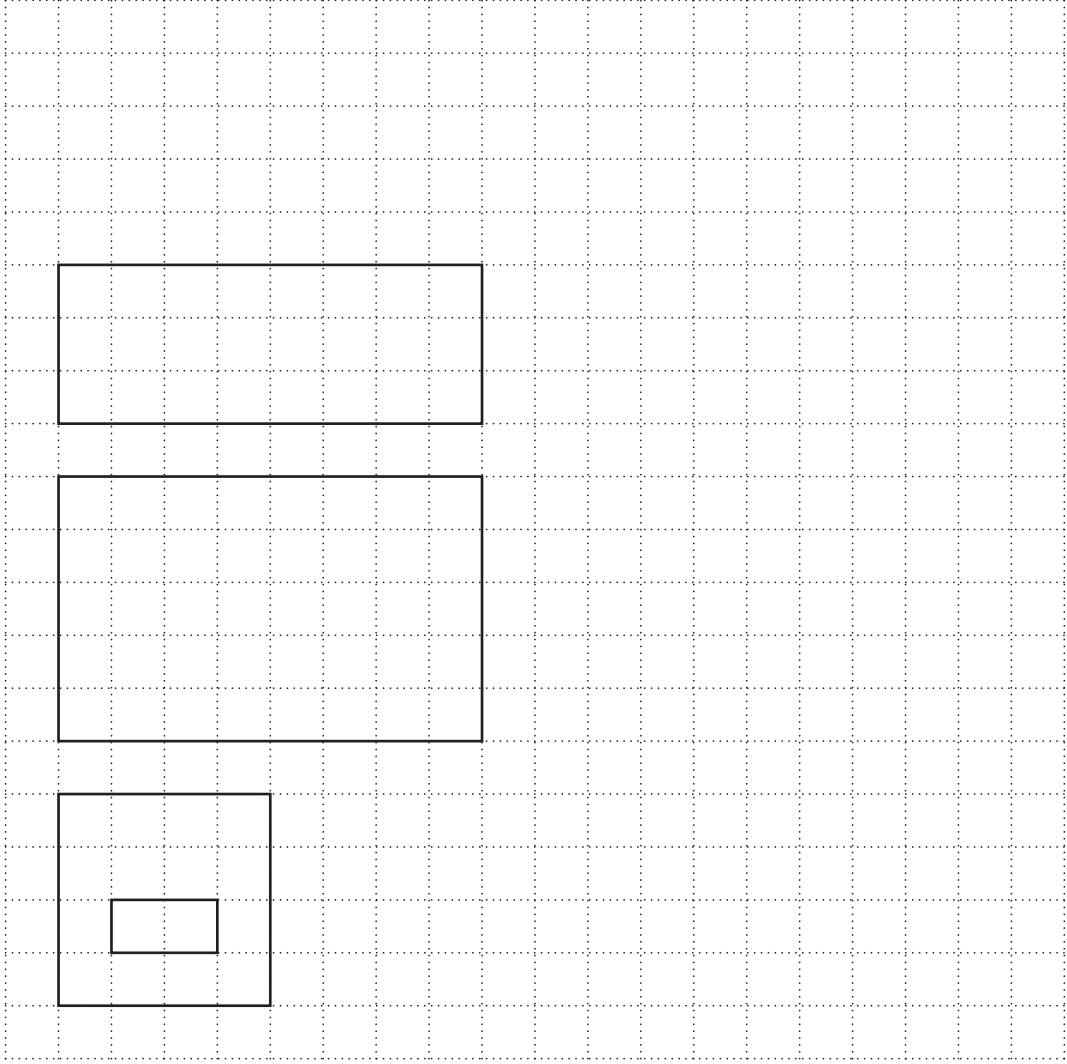
(c) Add the thick and thin line technique to the sketch of the handle below.

[3]



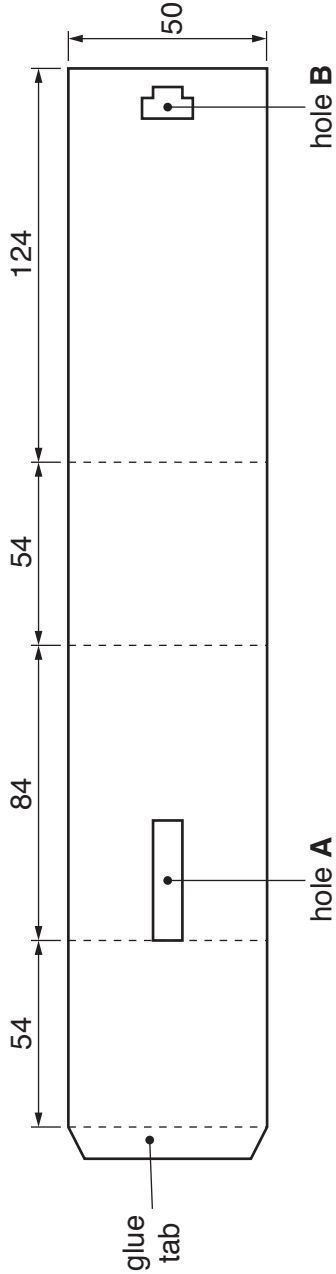
(d) An improved model of the mug is made from six pieces of Styrofoam cut from a 10 mm thick sheet.

Complete the drawing below to show the six pieces of Styrofoam required to make the mug. [6]



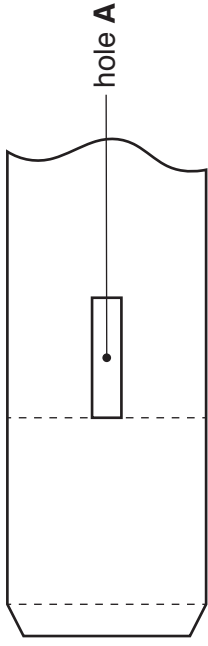
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(e) The model of the mug is packaged in a card sleeve. The development (net) for the sleeve is shown below.



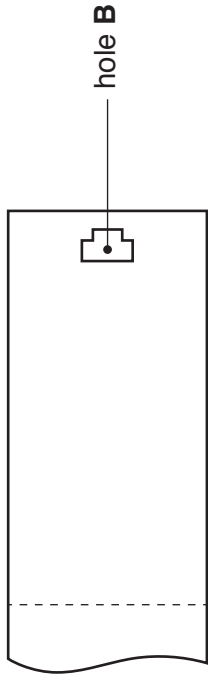
Construct a full size isometric drawing of the fully assembled package for the mug.
Do **not** include the mug in the drawing. Estimate any dimensions not given. [8]

(f) The holes in the card sleeve for packaging the mug are important design features.



(i) State the purpose of hole **A**.

.....
..... [1]

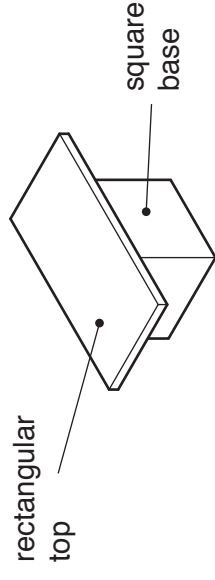


(ii) State the purpose of hole **B**.

.....
..... [1]

Section B

Answer any **two** questions from this section.



B2 A model of a coffee table is shown on the right.

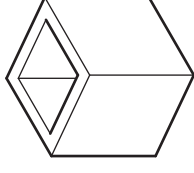
(a) Complete the table below to show **three** different designs for the top of the coffee table.

(ii) A 100×60 rectangle with an 80×40 rectangle in the middle. [3]

(ii) An ellipse with major axis 100 and minor axis 60. [6]

(iii) A hexagon with length of side 30. [3]

(b) The base for the model of the coffee table is made from 5 mm thick foam board.



Use sketches and notes to show how a strip of foam board could be folded to make the base. Include the names of the tools and equipment used to cut the foam board and the adhesive used to join it together.

(c) (ii) Give **two** justified specification points for the coffee table.

1.

2.

2.[2]

(ii) Describe how **one** of the specification points could be evaluated.

.....2.....

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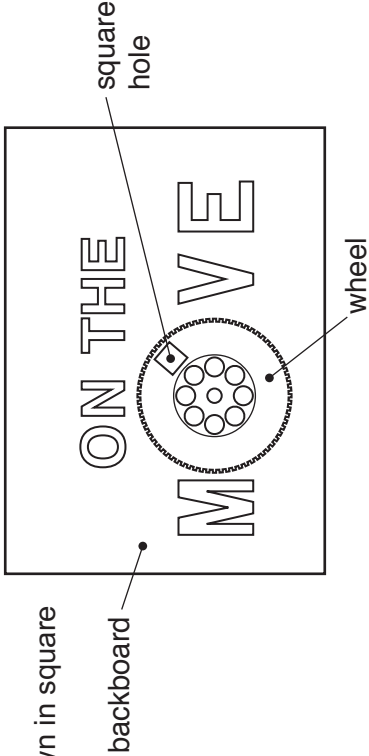
Candidate Number

Candidate Surname

[Turn over

Sheet 2 of 3

B3 The sign shown on the right is made from corrugated plastic sheet.
The wheel rotates to reveal six drawings drawn in square boxes on the backboard.

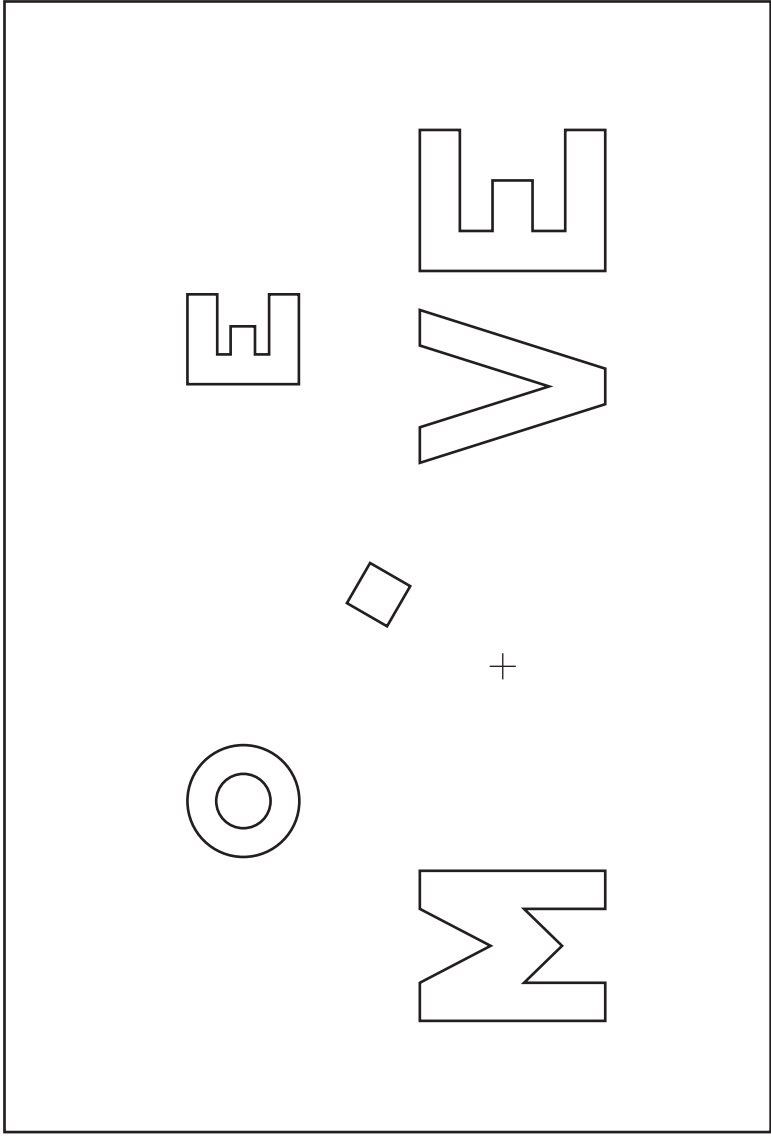


(a) Complete the sectional view of corrugated plastic sheet below. [2]



(b) Complete the drawing below of the backboard by:

- (i) adding the missing letters N, T and H; [4]
- (ii) adding five more equally spaced squares. [7]



(c) Use a sketch and notes to show a method of fastening the wheel to the backboard so it can rotate. [3]

(d) Describe how the lettering could be made from self adhesive vinyl and then applied to the backboard.

.....

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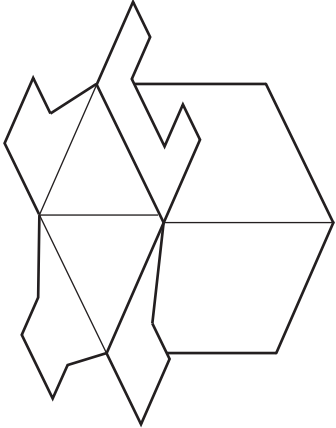
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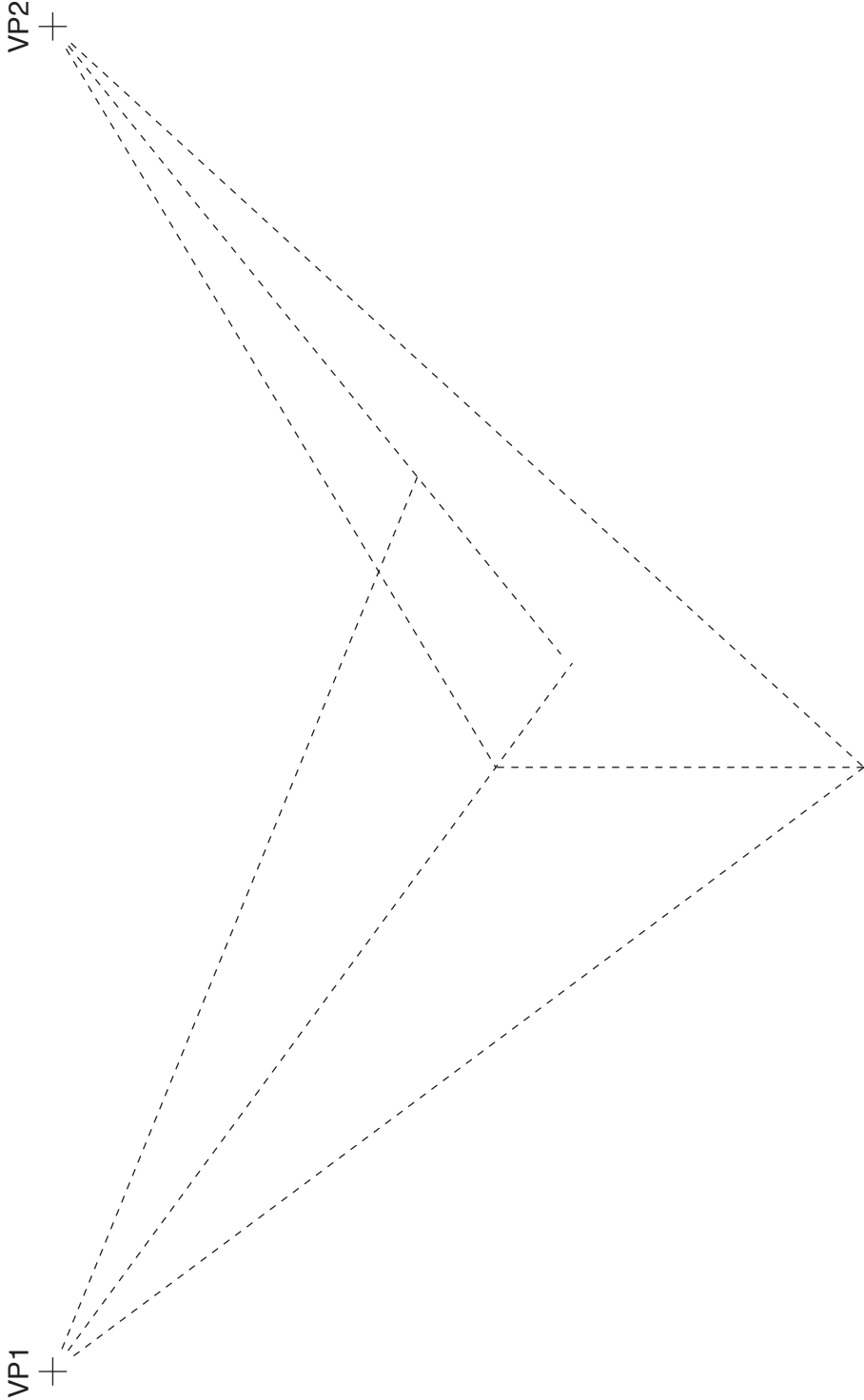
(e) Use sketches and notes to show how the sign could be supported in an upright position on a flat surface. [4]

.....[5]

B4 The card box for a trophy is shown on the right.



(a) Complete the two point perspective drawing below of the card box with the flaps in the open position. [10]



(b) There are three different size trophies each packaged in a different coloured box. The cost of making each box is shown in the table below.

	medium red box	small yellow box	large blue box
cost	\$4	\$3	\$6

Draw a three dimensional bar chart to show the cost of making each of the three boxes.
Use colour and labels to enhance the drawing. [8]

(c) (i) Explain **two** reasons why the cost of making the boxes is different.

1.[2]
2.[2]

(ii) Explain the importance of colour in packaging design.

-[3]
-
-
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