



Pre-Junior Certificate Examination, 2011

***Technical Graphics
Higher Level***

***Section A
(120 marks)***

Time : 3 Hours

Instructions

- (a) Answer **any ten** questions in the spaces provided.
All questions carry equal marks.
- (b) Construction lines must be clearly shown.
- (c) All measurements are in millimetres.
- (d) This booklet must be handed up at the end of the examination.
- (e) Write your name, school's name and teacher's name in the boxes below and on all other pages used.

Name:

School:

Teacher:

School Stamp

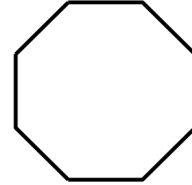
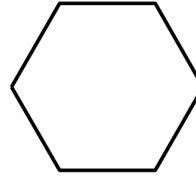
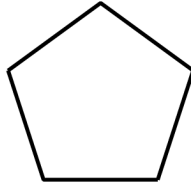
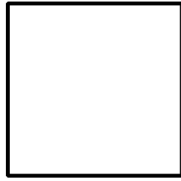
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Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

SECTION A. Answer **any ten** questions. All questions carry equal marks.

- 1** Fill in the label for **each** diagram by selecting from the list on the right.

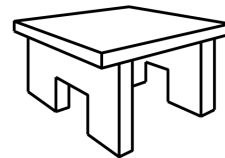
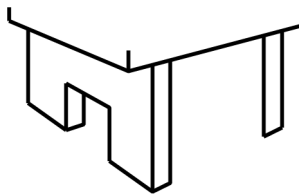
- Hexagon
- Quadrilateral
- Octagon
- Pentagon



1 _____ 2 _____ 3 _____ 4 _____

- 2** The figure shows the incomplete perspective drawing of the outline of a garden seat. A 3D graphic of the garden seat is also shown. Complete the perspective drawing.

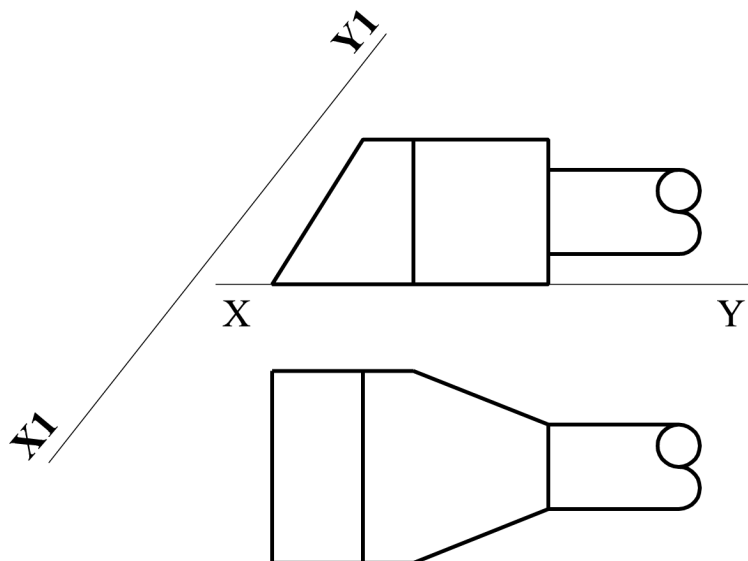
VP +-----+ VP



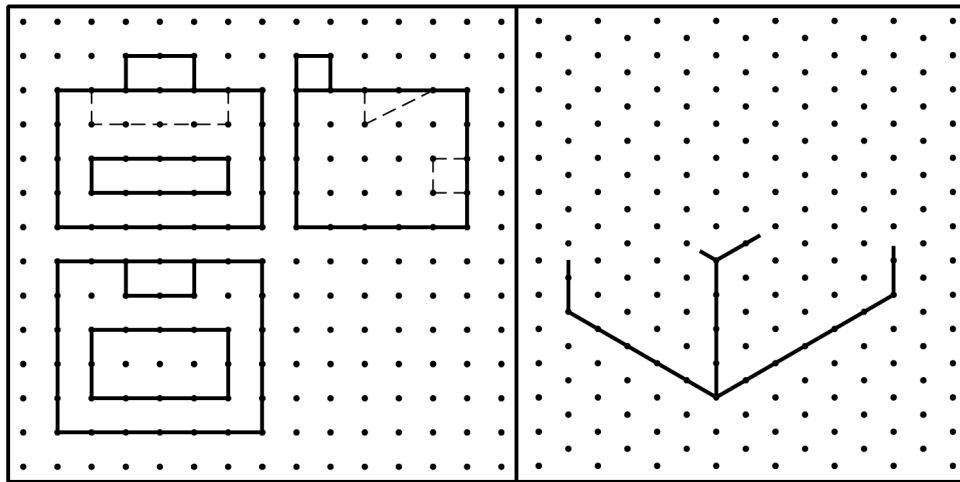
- 3** The figure shows the plan and elevation of a scoop.

Project an auxiliary elevation of the scoop on the X_1Y_1 line shown.

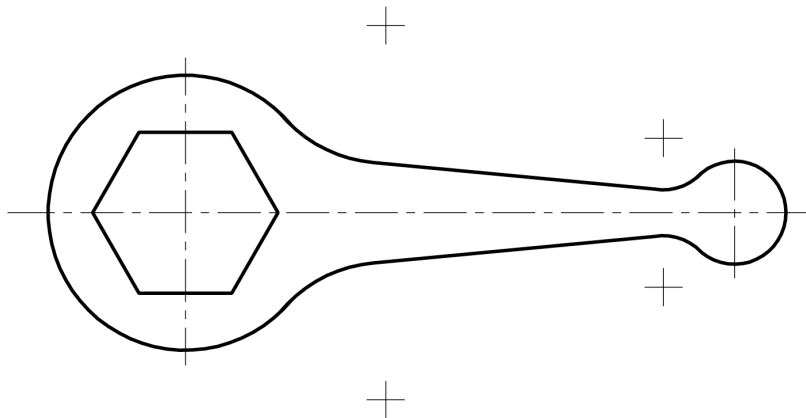
Note: It is not necessary to include the handle.



- 4 The elevation, plan and end view of a printer are shown on the square grid. Complete the pictorial sketch of the printer. Colour **or** shade the completed sketch.



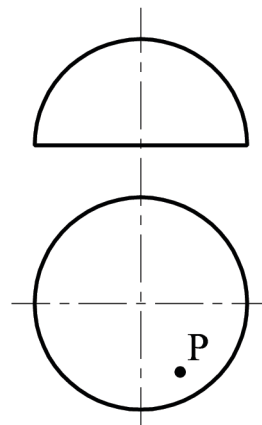
- 5 The figure shows the design for a spanner. The centres of the arcs are shown. Show clearly all points of contact.



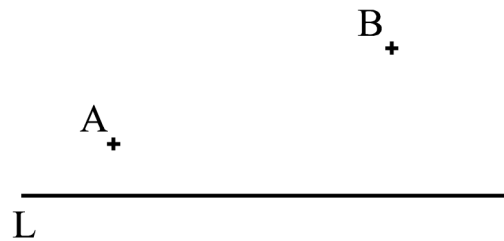
- 6 The figure shows the plan and elevation of a hemisphere.

The position of point **P** is shown on the plan.

Locate the position of point **P** on the elevation.



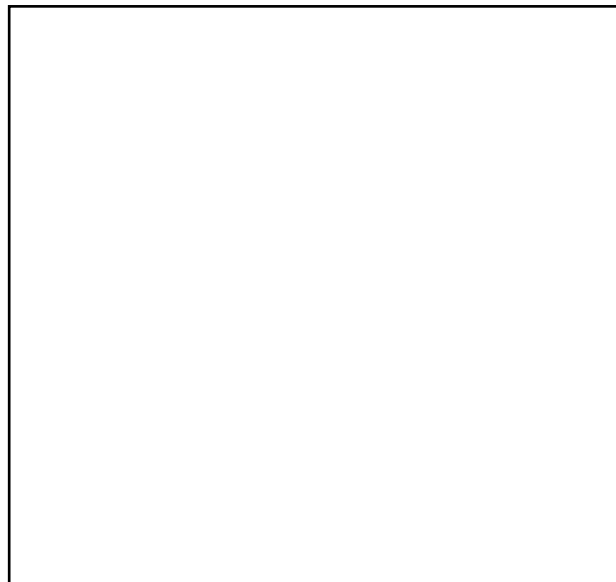
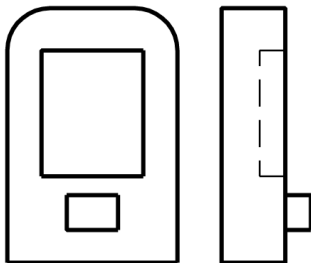
- 7 A and B are the locations of two houses which are to be connected to the water main L. Find a connection point P on the line L which is equidistant from A and B.



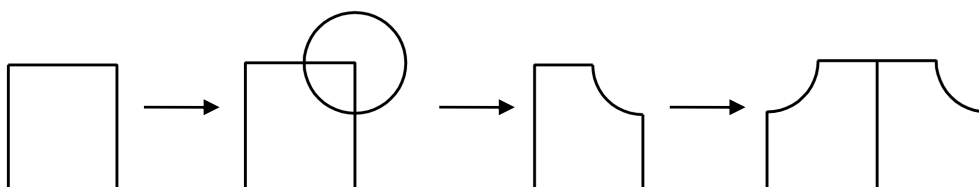
- 8 The elevation and end view of a mobile phone are shown.

In the space provided draw a **freehand pictorial sketch** of the mobile phone.

Colour **or** shade the sketch.



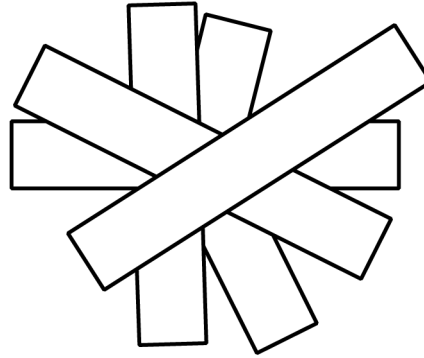
- 9 List the CAD commands used to edit the figure as shown in the sequence below.



CAD commands: _____

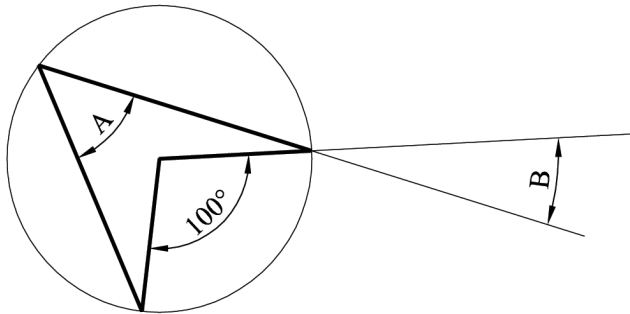
- 10** The figure shows a collection of strips of paper. All strips have the same width.

Determine the number of strips shown.



No. of strips: _____

- 11** Write down the measure of the angles marked **A** and **B**.

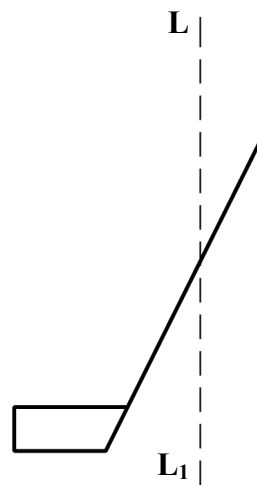


A = _____

B = _____

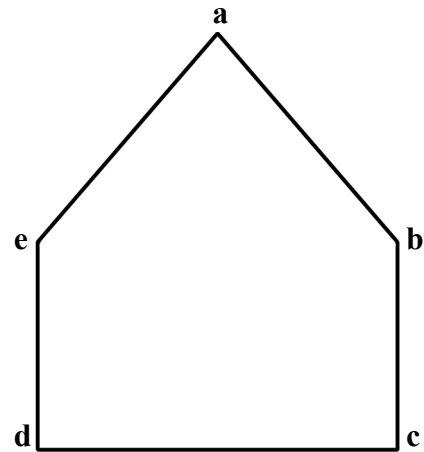
- 12** The figure shows an incomplete logo for a golf club.

Complete the logo by constructing the image of the figure under an axial symmetry in the line **L-L₁**.

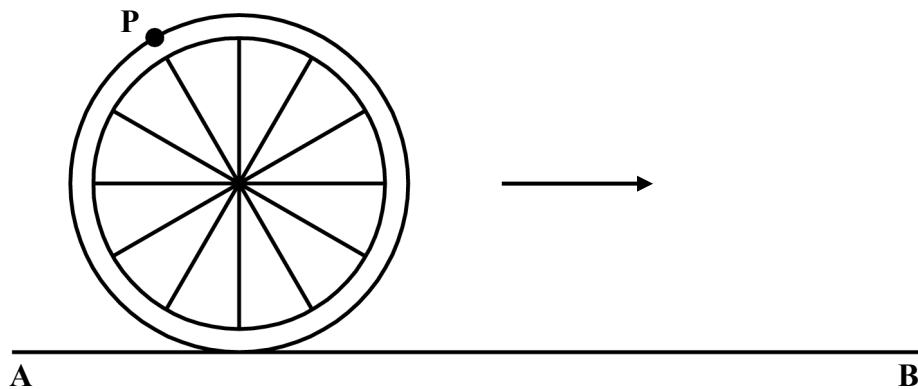


- 13** The figure shows the outline of a window **abcde**.

Draw a rectangular window equal in area to the given window **abcde**.



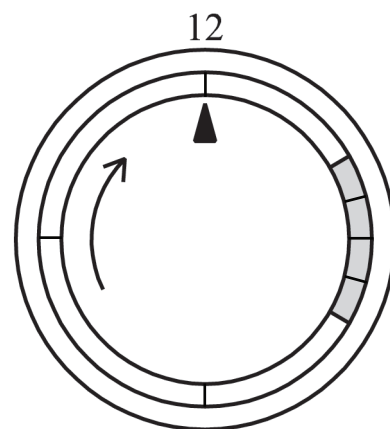
- 14** The given wheel is marked by point **P**. The wheel rolls along the line **AB** in the direction indicated by the arrow. Determine where the point **P** meets the line **AB**.



- 15** The figure shows a 24hr time clock for a heating system.

The time is set at 12 noon and the shaded area shows the heating coming on from 16:00 to 20:00.

Apply shading to switch the heating on from 24:00 to 06:00.



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