



*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:**

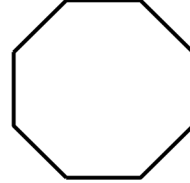
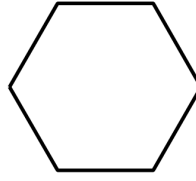
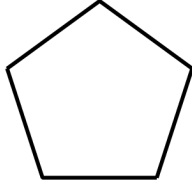
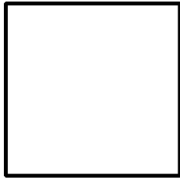

<b>School Stamp</b>

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

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

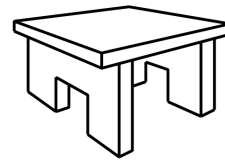
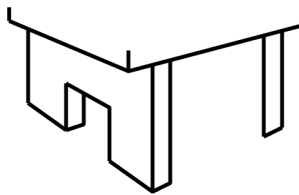
**1** Fill in the label for **each** diagram by selecting from the list on the right.

- Hexagon
- Quadrilateral
- Octagon
- Pentagon



1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_

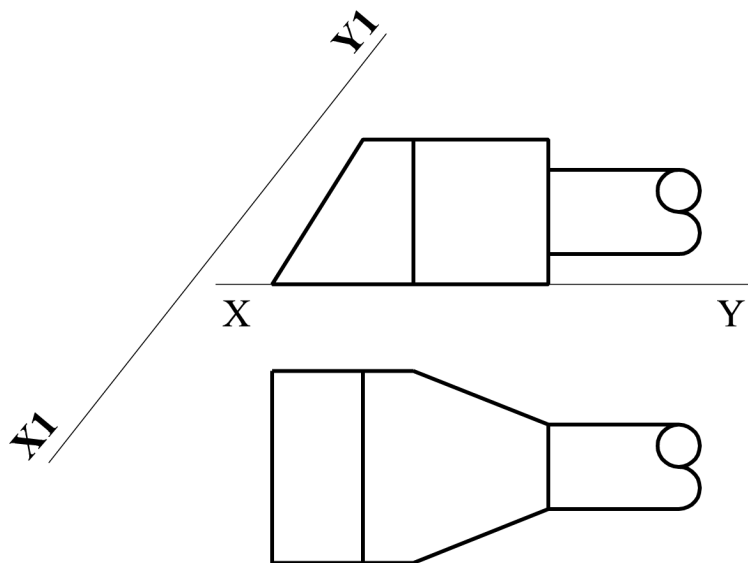
**2** The figure shows the incomplete perspective drawing of the outline of a garden seat. A 3D graphic of the garden seat is also shown. Complete the perspective drawing.



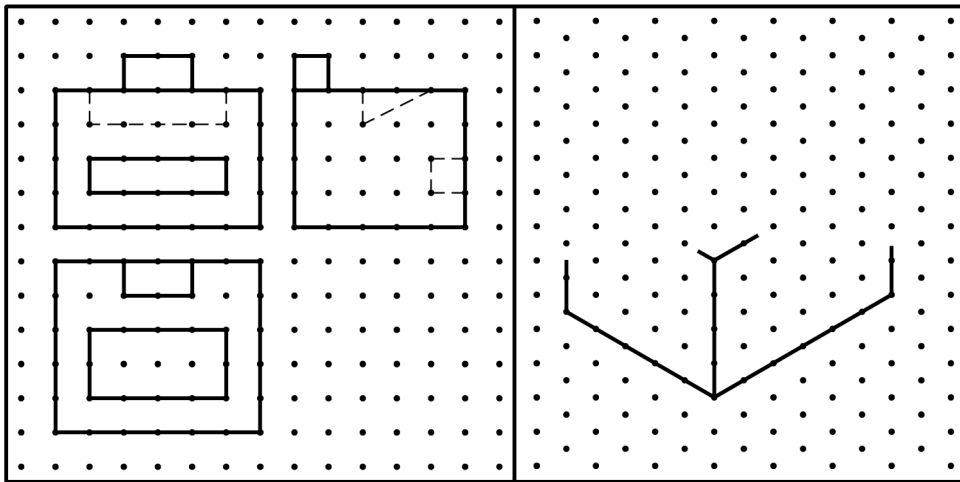
**3** The figure shows the plan and elevation of a scoop.

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

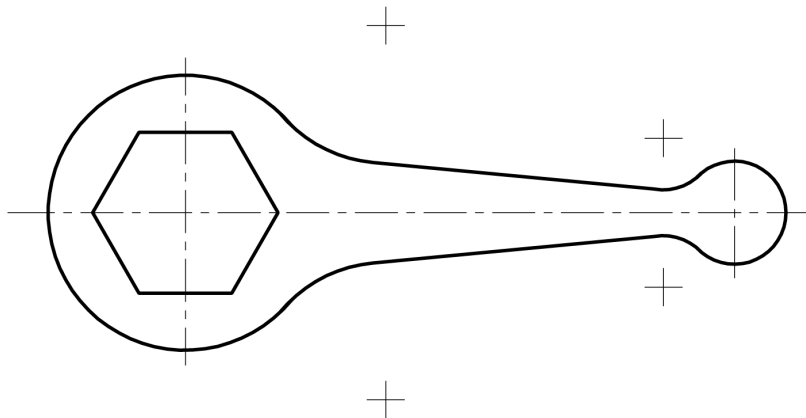
*Note: It is not necessary to include the handle.*



- 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.



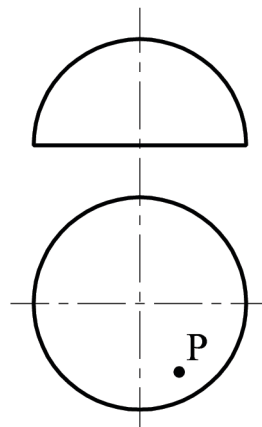
- 5 The figure shows the design for a spanner. The centres of the arcs are shown. Show clearly all points of contact.



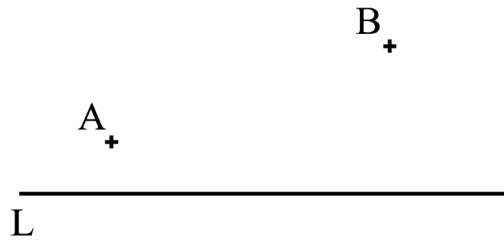
- 6 The figure shows the plan and elevation of a hemisphere.

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

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



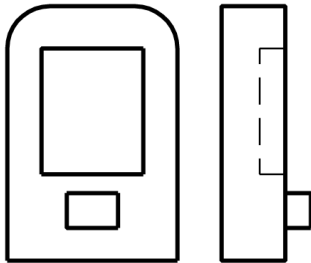
- 7 A and B are the locations of two houses which are to be connected to the water main L. Find a connection point P on the line L which is equidistant from A and B.



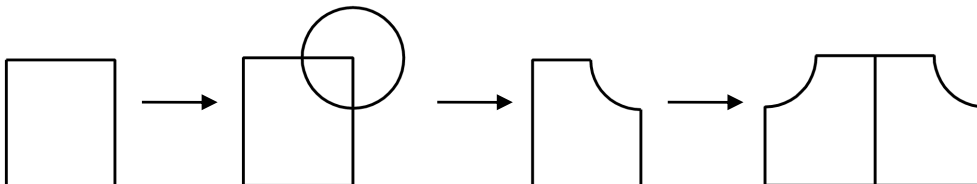
- 8 The elevation and end view of a mobile phone are shown.

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

Colour **or** shade the sketch.

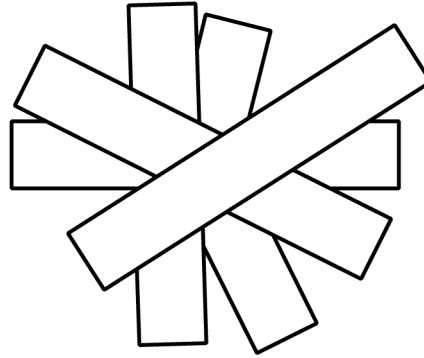


- 9 List the CAD commands used to edit the figure as shown in the sequence below.



**CAD commands:** \_\_\_\_\_

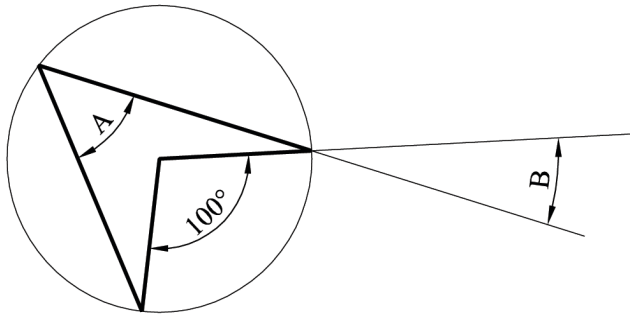
- 10** The figure shows a collection of strips of paper. All strips have the same width.



Determine the number of strips shown.

**No. of strips:** \_\_\_\_\_

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

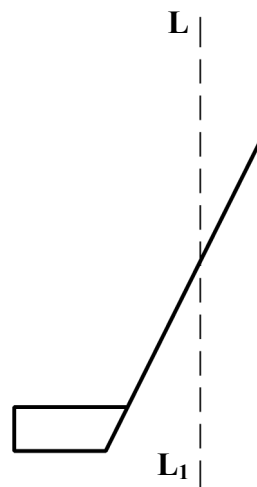


**A** = \_\_\_\_\_

**B** = \_\_\_\_\_

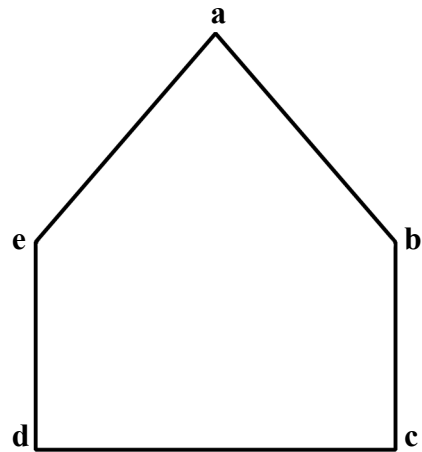
- 12** The figure shows an incomplete logo for a golf club.

Complete the logo by constructing the image of the figure under an axial symmetry in the line **L-L<sub>1</sub>**.

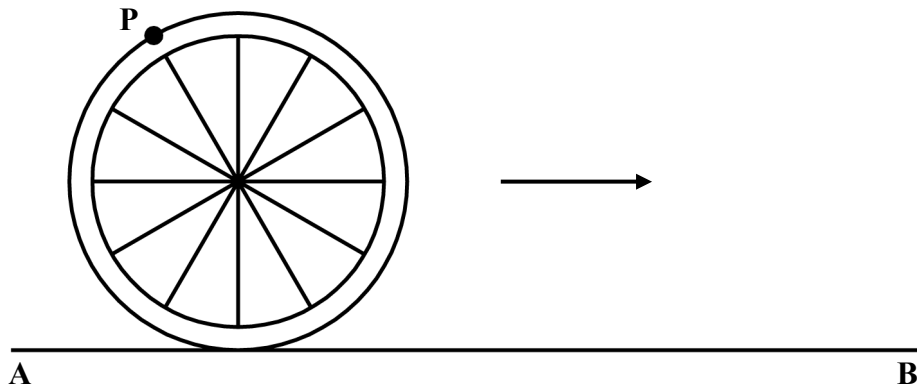


- 13** The figure shows the outline of a window **abcde**.

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



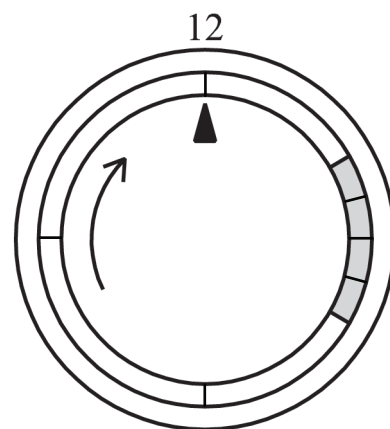
- 14** The given wheel is marked by point **P**. The wheel rolls along the line **AB** in the direction indicated by the arrow. Determine where the point **P** meets the line **AB**.



- 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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