



*Pre-Junior Certificate Examination, 2015*

***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 provided below and on all other pages used.

***Name:***

***School:***

***Teacher:***

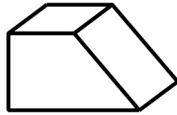

<b>School Stamp</b>

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

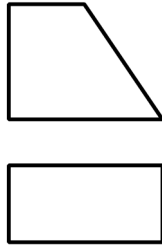
**SECTION A.** Answer **any ten** questions. All questions carry equal marks.

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

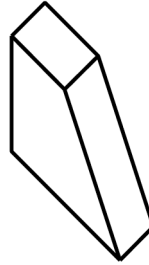
- Planometric
- Oblique
- Isometric
- Orthographic



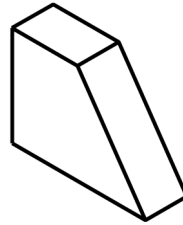
1. \_\_\_\_\_



2. \_\_\_\_\_

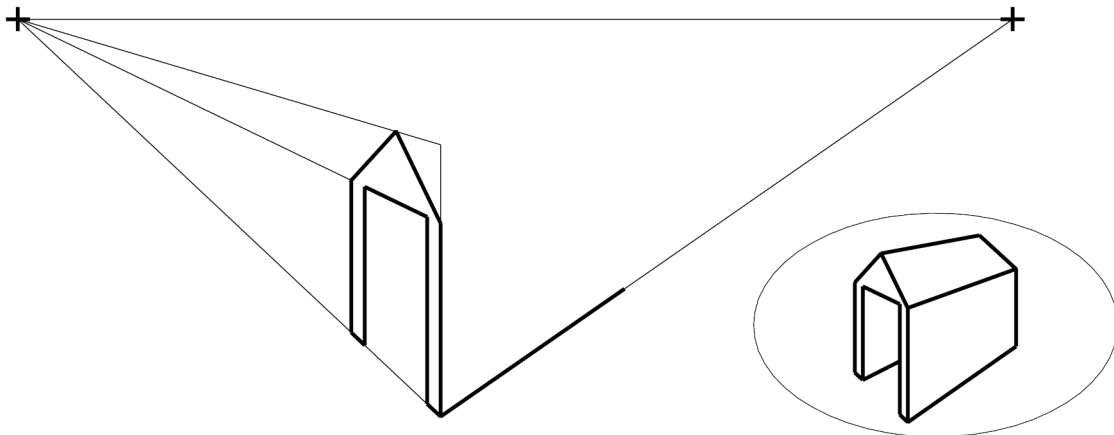


3. \_\_\_\_\_



4. \_\_\_\_\_

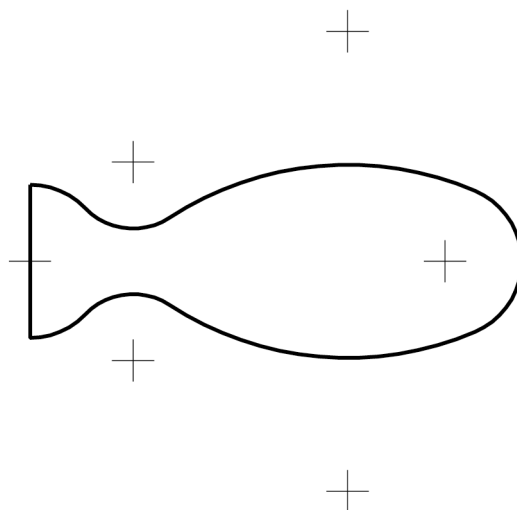
**2.** The figure shows the incomplete perspective drawing of a toy tunnel. A 3D graphic is also shown. Complete the perspective drawing.



**3.** The figure shows the design for the handle of a screwdriver. The centres of the arcs are shown.

A 3D graphic is also shown.

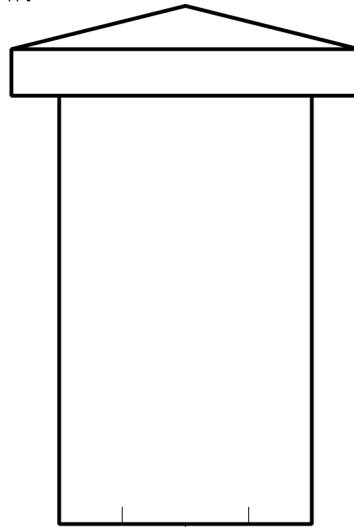
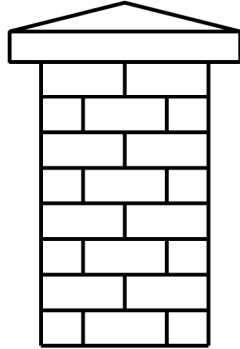
Show clearly all points of contact.



4. The figure shows the incomplete drawing of a gate pier.

A graphic of the completed pier is shown below.

Complete the drawing of the pier showing clearly how to determine the height of the bricks.



5. Fig. 1 shows the design of a sailboat. The base of the boat is a semi-ellipse as shown with point A on the curve. Fig. 2 shows the major axis of an ellipse and a point A on the curve.

Determine the length of the minor axis and find five points on the curve.

Fig. 1

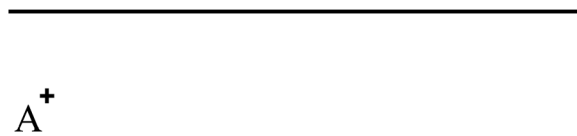
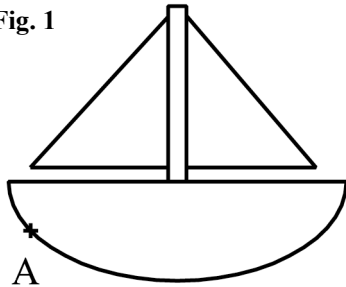
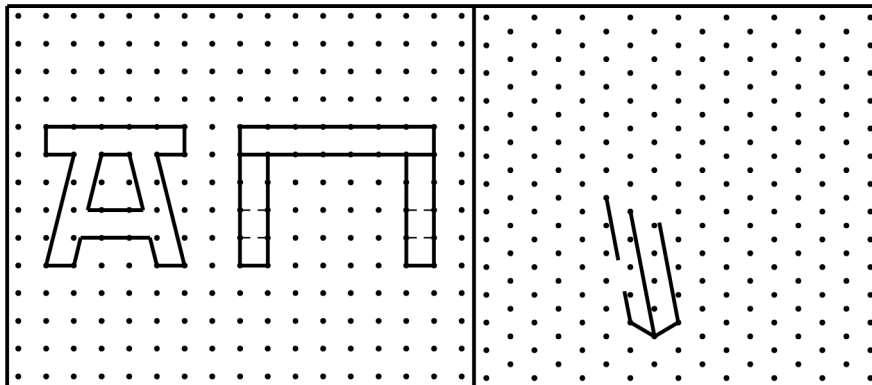
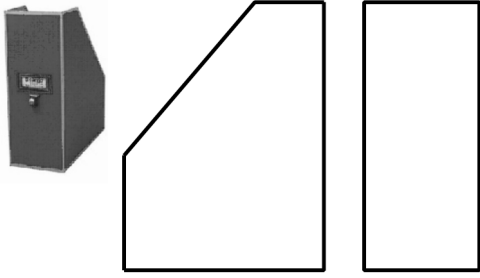


Fig. 2

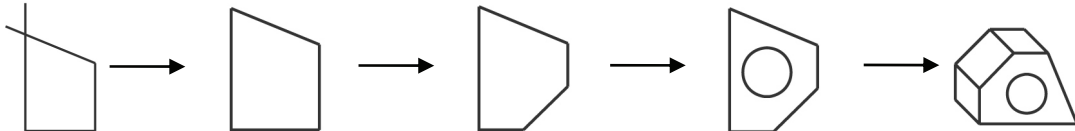
6. The elevation and end elevation of a table are shown on the square grid. Make a **freehand pictorial sketch** of the table. Colour or shade the new sketch.



7. The figure shows the elevation and end elevation of an office storage box. A 3D graphic is also shown. Draw a development of the box.

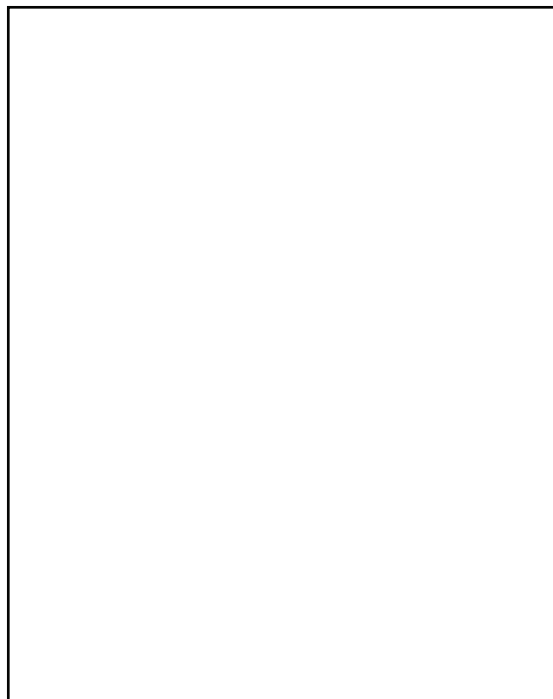
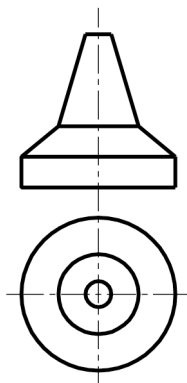


8. Write down **any three** CAD commands used to edit the figure as shown in the sequence below.



Any **three** CAD commands: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

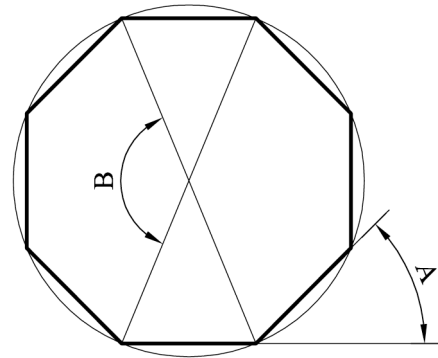
9. The elevation and plan of a traffic cone are shown. In the space provided, draw a **freehand pictorial sketch** of the traffic cone. Colour **or** shade the sketch.



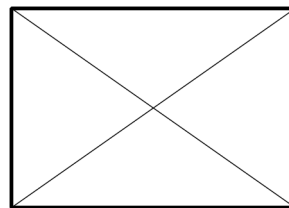
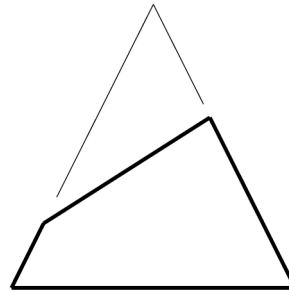
**10.** Write down the measures of the angles marked **A** and **B**.

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

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

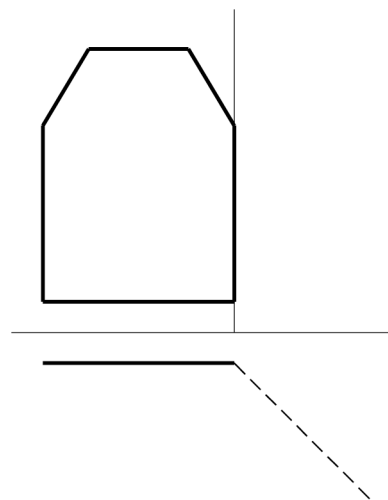
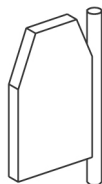


**11.** Complete the plan of the truncated pyramid shown.



**12.** The figure shows the outline plan and elevation of a garden gate. A 3D graphic is also shown.

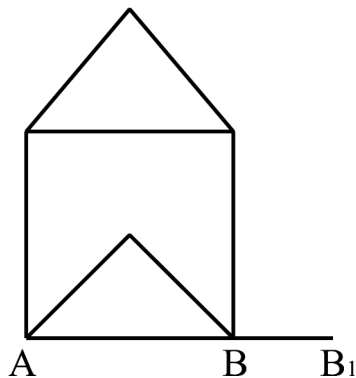
Complete the elevation of the gate when it is rotated into the position as shown by the broken line in plan.



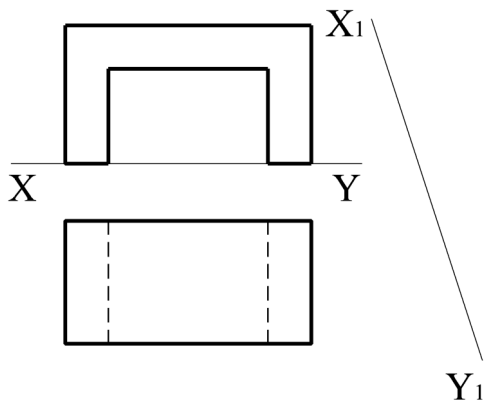
**13.** The figure shows the logo for a building company.

Draw a new logo similar to the given logo, with the base **AB** increased to **AB<sub>1</sub>**.

Colour **or** shade the new logo.



**14.** The figure shows the elevation and plan of a garden seat. Project an auxiliary elevation of the bridge on the line **X<sub>1</sub>-Y<sub>1</sub>** shown.



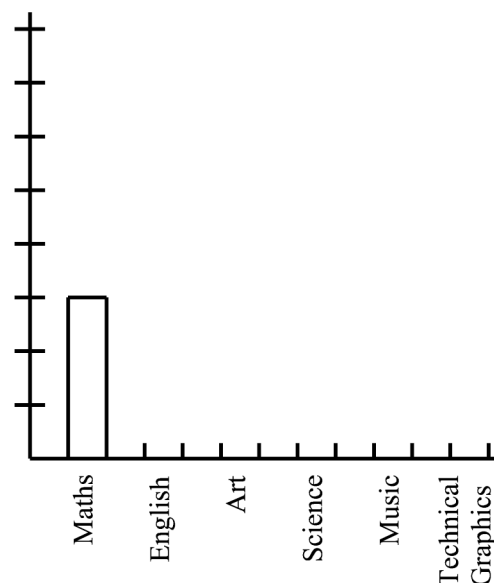
**15.** Twenty four students were surveyed about their favourite subject.

The results were as follows:

- Maths - 3 students
- English - 4 students
- Art - 2 students
- Science - 5 students
- Music - 2 students
- Technical Graphics - 8 students

Complete the bar chart to represent this information graphically.

Colour **or** shade the completed chart.



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