



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:

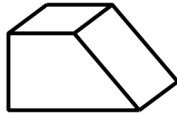
School Stamp

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

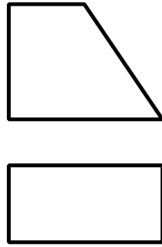
SECTION A. Answer **any ten** questions. All questions carry equal marks.

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

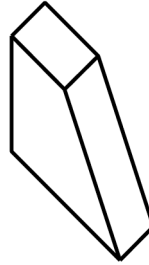
- Planometric
- Oblique
- Isometric
- Orthographic



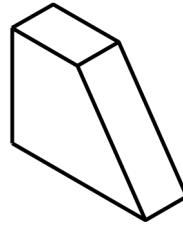
1. _____



2. _____

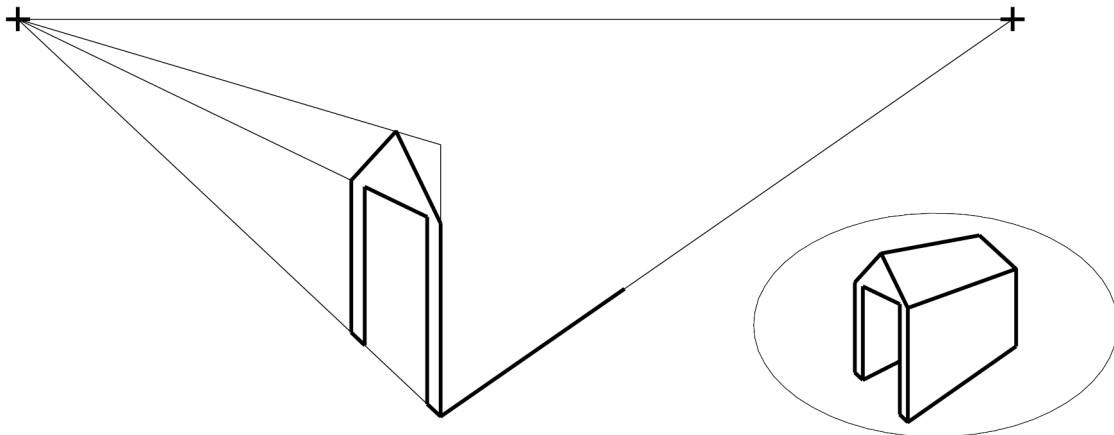


3. _____



4. _____

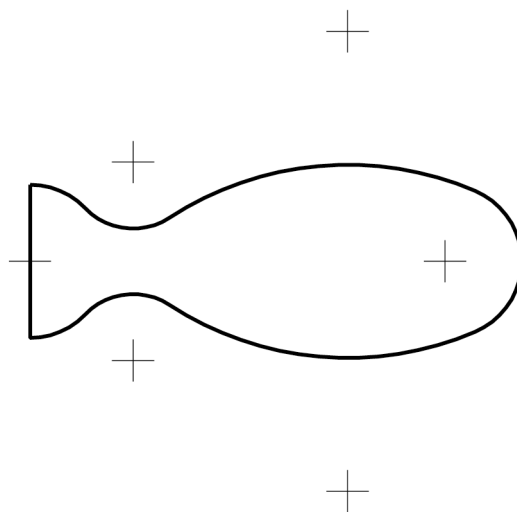
2. The figure shows the incomplete perspective drawing of a toy tunnel. A 3D graphic is also shown. Complete the perspective drawing.



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.

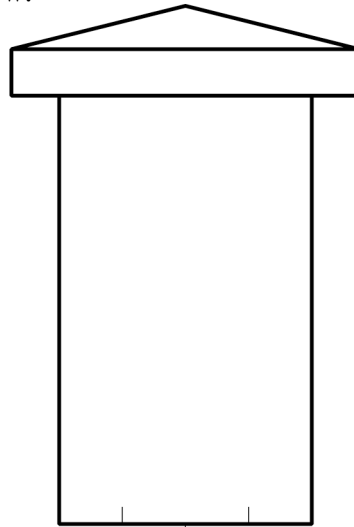
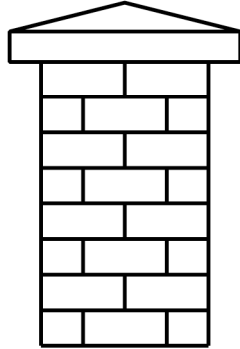
Show clearly all points of contact.



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

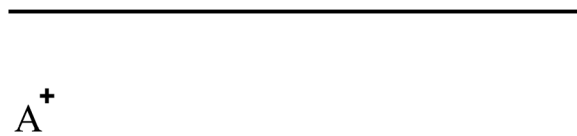
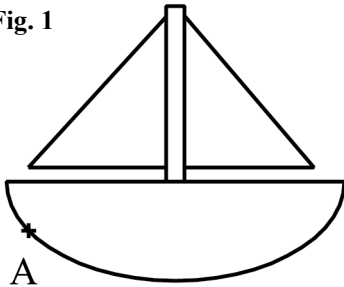
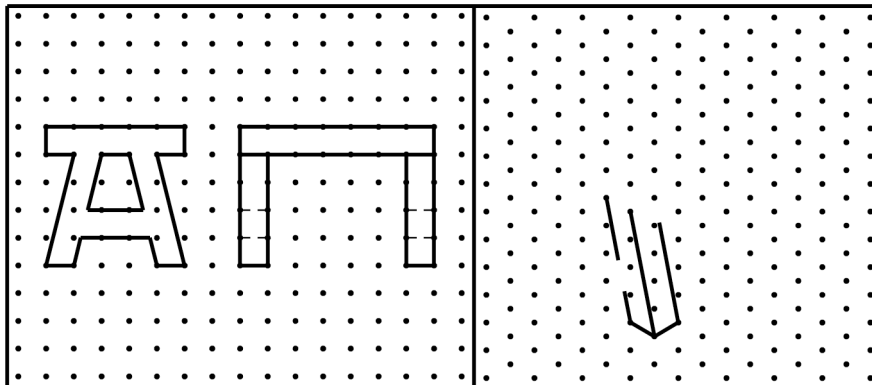
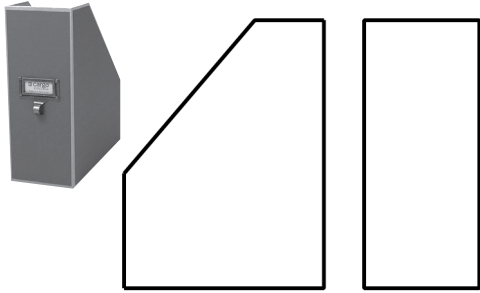


Fig. 2

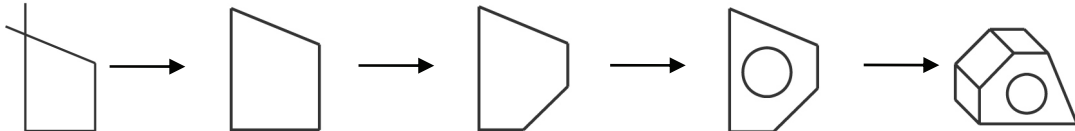
6. The elevation and end elevation of a table are shown on the square grid. Make a **freehand pictorial sketch** of the table. Colour or shade the new sketch.



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.

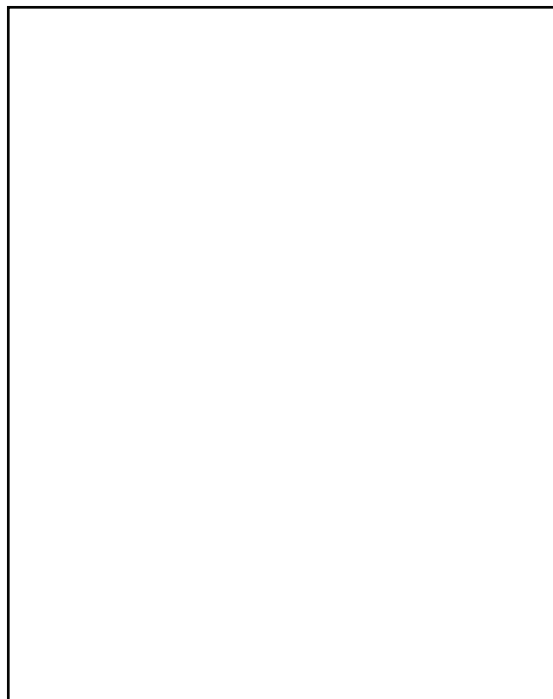
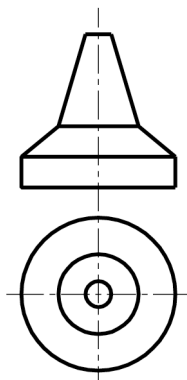


8. Write down **any three** CAD commands used to edit the figure as shown in the sequence below.



Any **three** CAD commands: _____

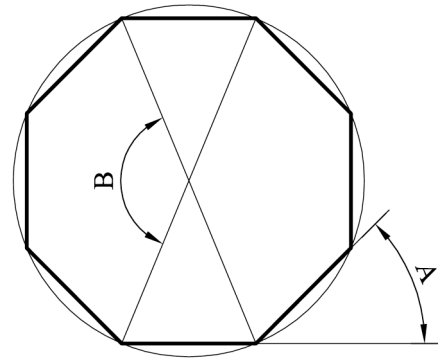
9. The elevation and plan of a traffic cone are shown. In the space provided, draw a **freehand pictorial sketch** of the traffic cone. Colour **or** shade the sketch.



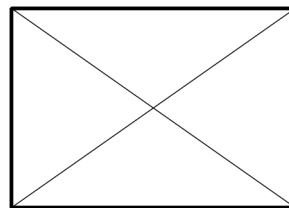
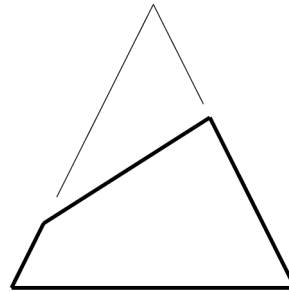
10. Write down the measures of the angles marked **A** and **B**.

A = _____

B = _____

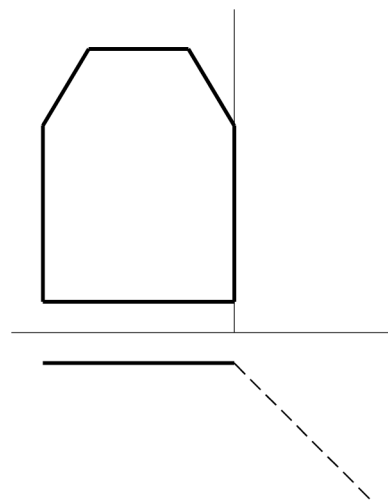
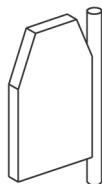


11. Complete the plan of the truncated pyramid shown.



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

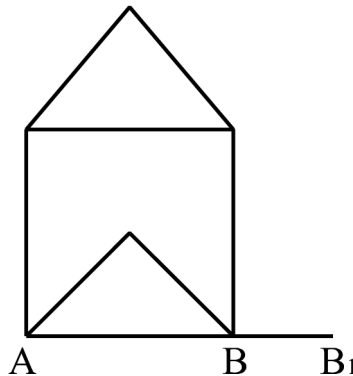
Complete the elevation of the gate when it is rotated into the position as shown by the broken line in plan.



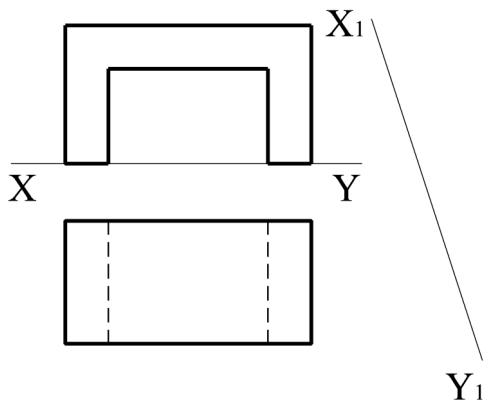
13. The figure shows the logo for a building company.

Draw a new logo similar to the given logo, with the base **AB** increased to **AB₁**.

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 **X₁-Y₁** shown.



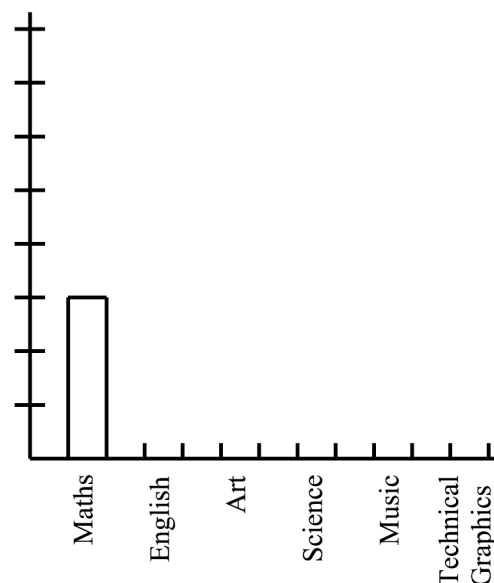
15. Twenty four students were surveyed about their favourite subject.

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.



Blank Page

Blank Page

