



Pre-Junior Certificate Examination, 2013

*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.

School Stamp

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

Name:

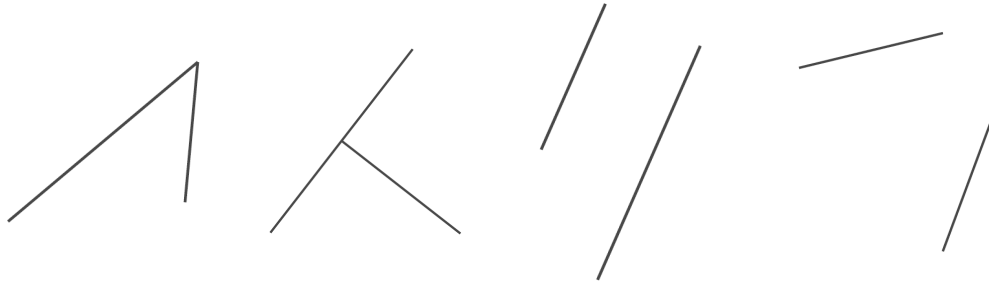
School:

Teacher:

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

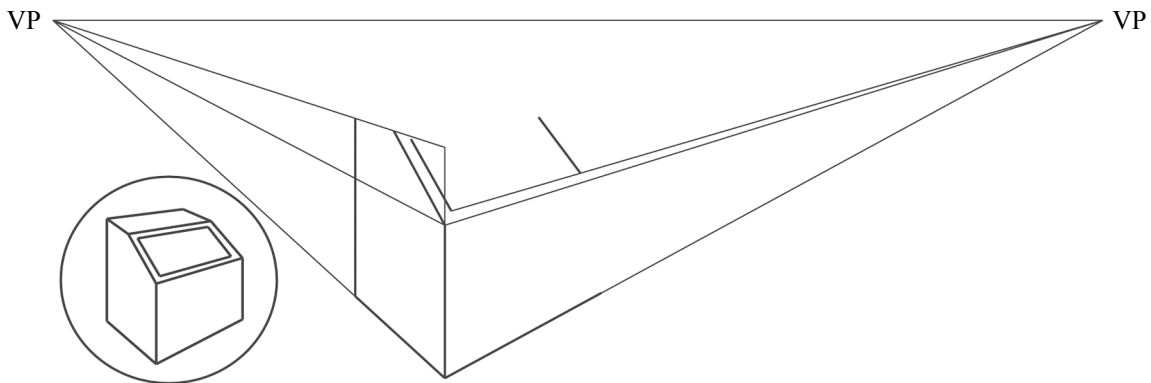
1 Fill in the label for **each** diagram by selecting from the given list.

- Equal
- Parallel
- Intersecting
- Perpendicular

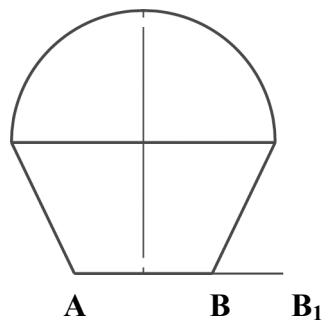


1 _____ **2** _____ **3** _____ **4** _____

2 The figure shows the incomplete perspective drawing of a litter bin. The drawing is not complete. A 3D graphic of the bin is also shown. Complete the perspective drawing.



3 The figure shows the logo for an ice-cream shop. Draw a new logo similar to the given logo with the length **AB** increased to **AB₁**. Colour or shade the new logo.



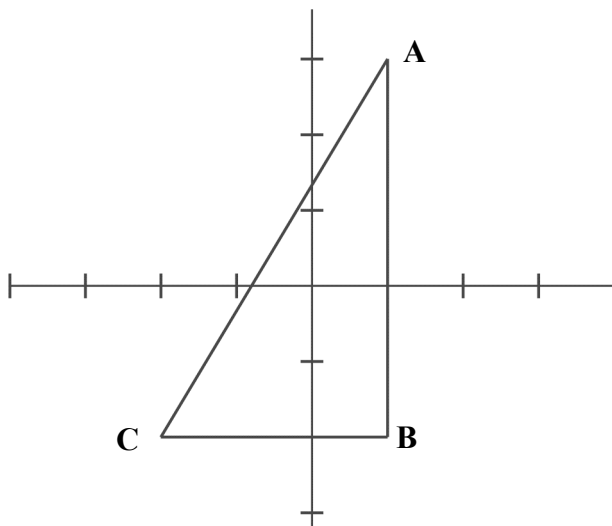
- 4 The X and Y axes shown are marked at intervals of 5 units.

Write down the co-ordinates of the vertices of the triangle ABC.

A: _____

B: _____

C: _____



- 5 Fig. 1 shows the design of a sign for a fish shop which is based on an ellipse. The line AO is a tangent to the ellipse at A. Locate the focal points of the ellipse in Fig. 2 and complete the sign by drawing the tangent BO, the tangent AO, and other details.

Fig.1

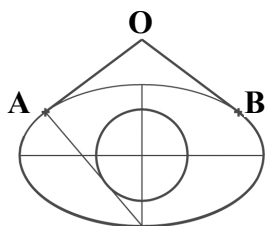
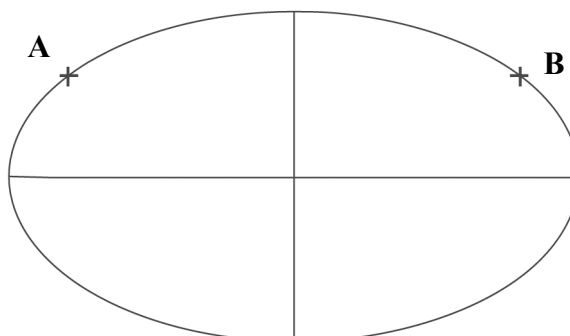
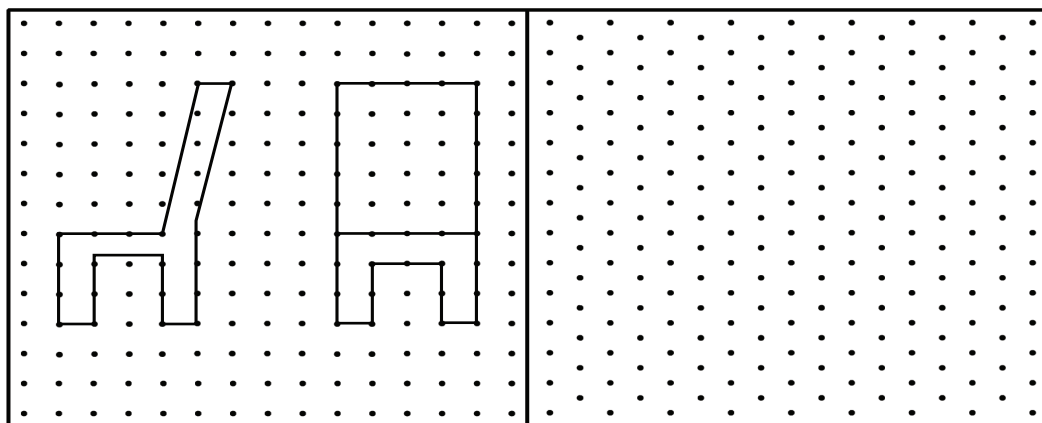


Fig.2



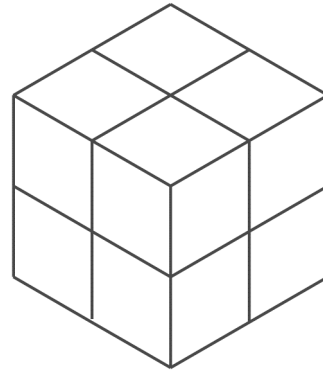
- 6 The elevation and end elevation of a chair are shown. Make a **freehand pictorial sketch** of the chair. Colour **or** shade the sketch.



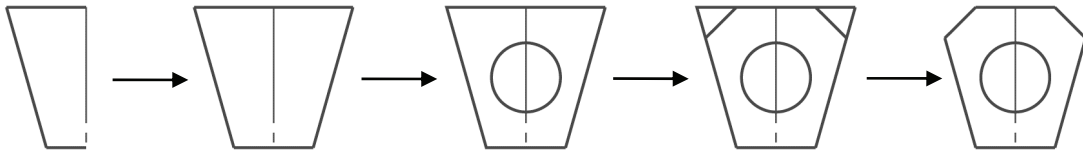
- 7 The figure shows an arrangement of cubes, all of which are the same size, resting on the horizontal plane. What is the minimum number of cubes shown in the diagram?
What is the maximum number of cubes shown in the diagram?

Minimum number: _____

Maximum number: _____



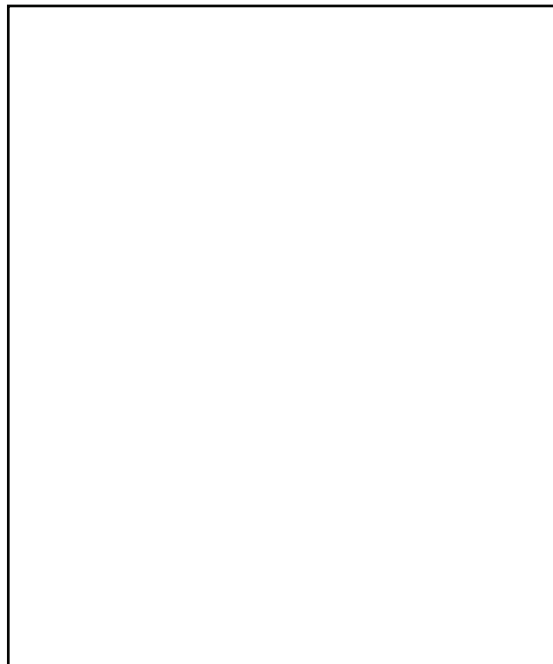
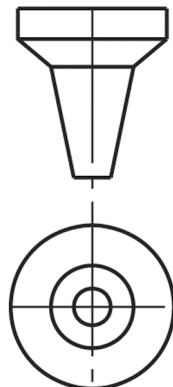
- 8 Write down **any three** CAD commands used to edit the figure as shown in the sequence.



Any **three** CAD commands: _____

- 9 The elevation and plan of a funnel are shown. In the space provided, draw a **freehand pictorial sketch** of the funnel.

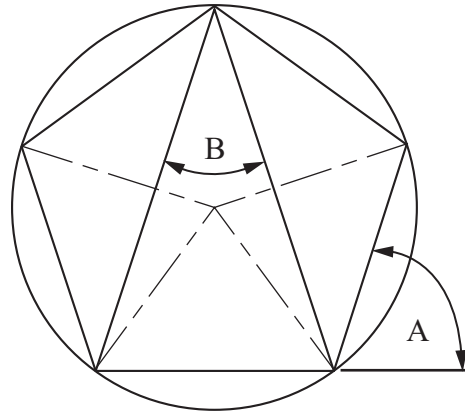
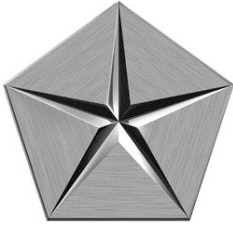
Colour **or**
shade the
sketch.



10 The diagram shows the outline of the logo for Chrysler cars. Also shown is a similar line diagram. Write down the measure of the angles marked **A** and **B**.

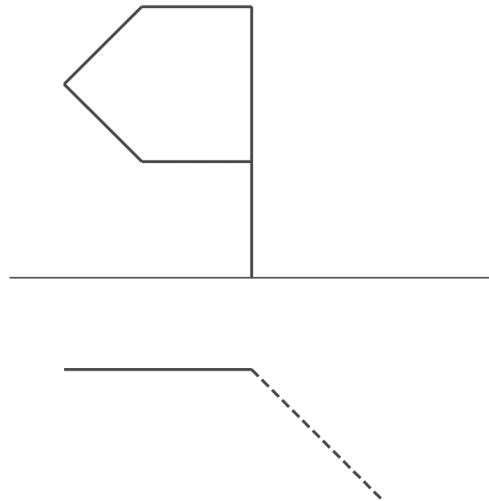
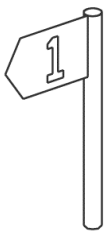
A = _____

B = _____

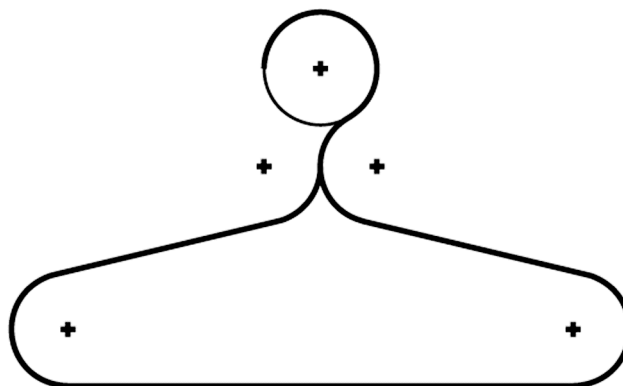


11 The figure shows the outline plan and elevation of a flag as used on a golf course. Also shown is a 3D graphic of the flag.

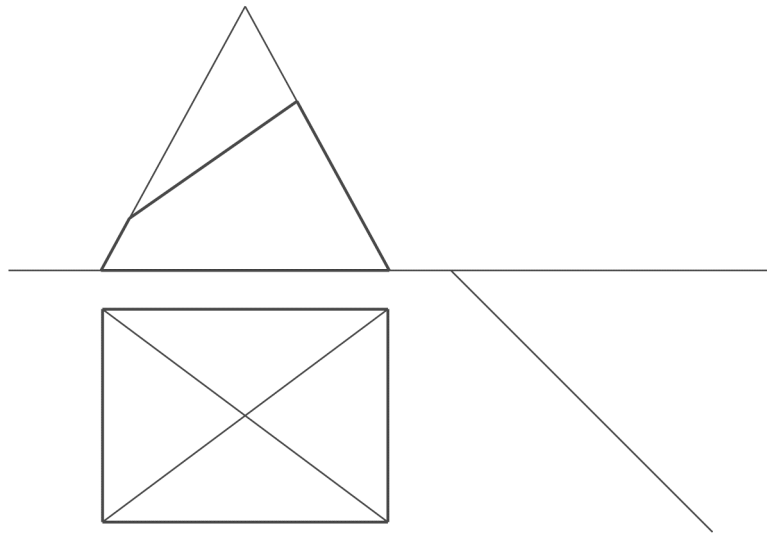
Complete the elevation of the flag in the rotated position as shown by the broken line in plan.



12 The figure shows the design for a coat hanger. The centre of the arcs are shown. Show clearly all points of contact.

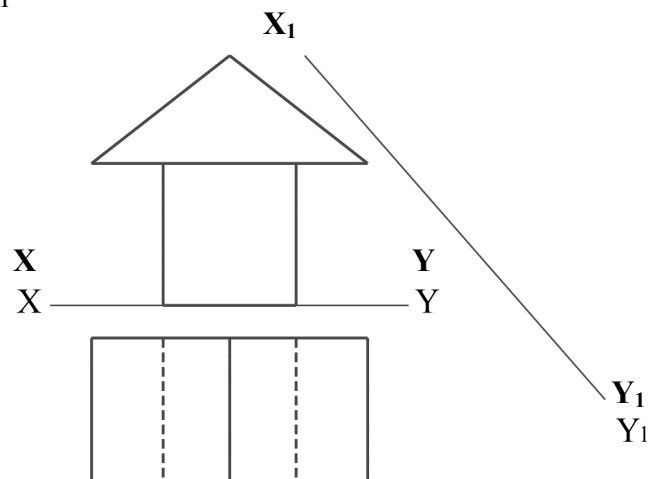


13 Complete the plan of the truncated pyramid and project an end elevation.



14 The figure shows the elevation and plan of some building blocks.

Project an auxiliary elevation of the building blocks on the X_1-Y_1 line shown.

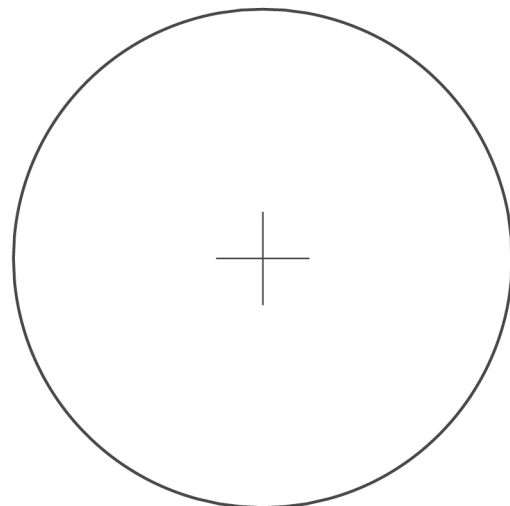


15 Twelve students were surveyed about their favourite crisps. The following were the results of the survey:

- Walkers - 6 students
- Tayto - 4 students
- Doritos - 2 students

Divide the given circle to represent this information graphically as a pie chart.

Colour or shade the completed pie chart.



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