



Pre-Junior Certificate Examination, 2012

*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:

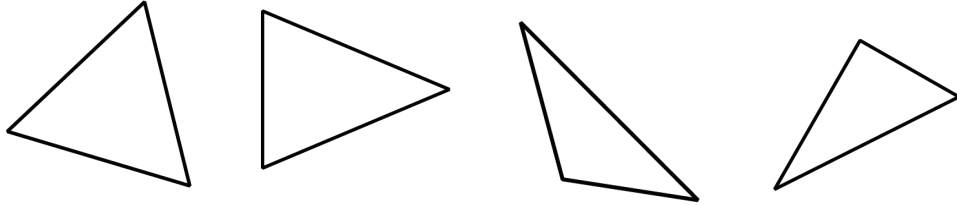
School Stamp

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

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

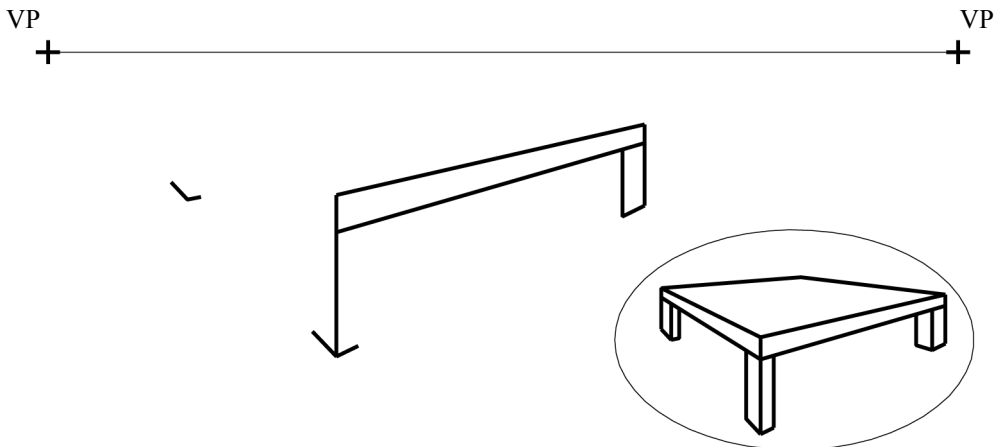
1 Fill in the label for **each** diagram by selecting from the given list.

- Right-angled
- Equilateral
- Scalene
- Isosceles



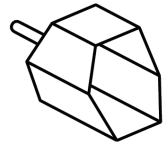
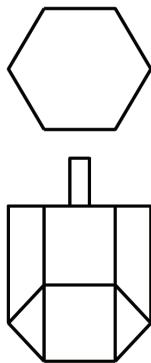
1. _____ 2. _____ 3. _____ 4. _____

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



3 The figure shows the elevation, plan and a 3D graphic of a sweet scoop. Draw the development of the sides of the sweet scoop.

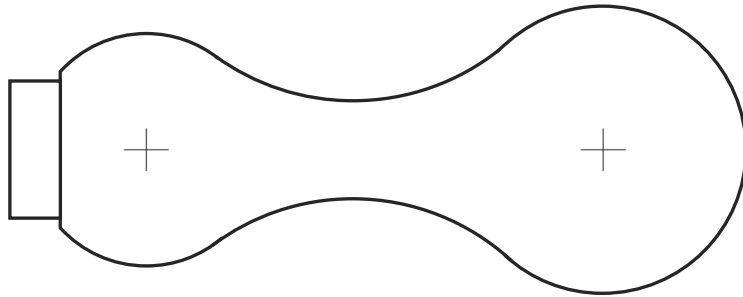
Note: It is not necessary to include the handle or the back surface.



- 4 The figure shows the outline of a screwdriver handle.

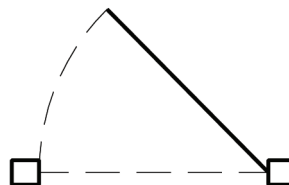
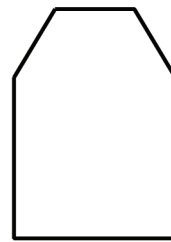
The centre of the arcs are shown.

Show clearly all the points of contact.

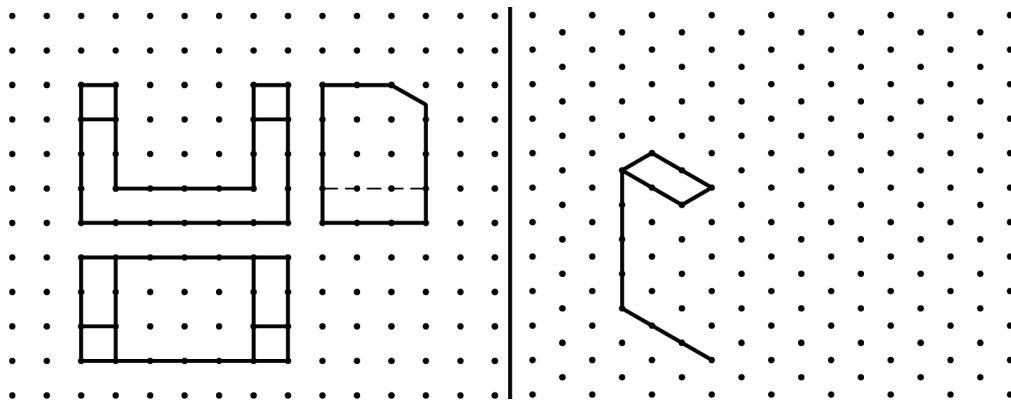


- 5 The elevation and plan of a partially opened garden gate are shown.

Complete the elevation of the given gate in its closed position, as shown by the broken line in plan.



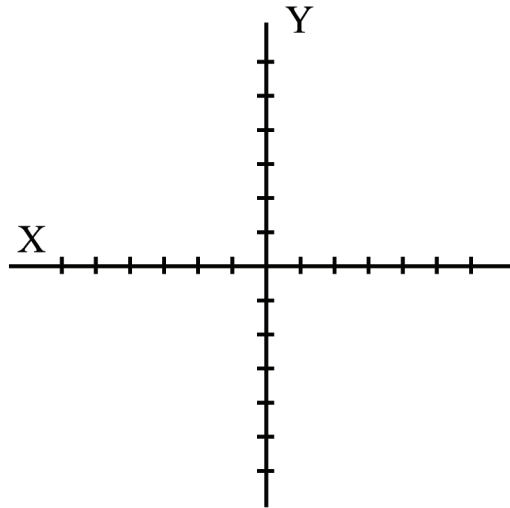
- 6 The elevation, plan and end elevation of a CD holder are shown on the square grid. Complete the pictorial sketch of the CD holder. Colour or shade the completed sketch.



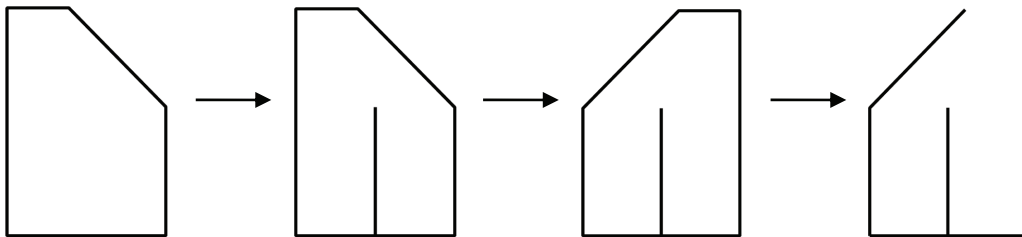
7 The X and Y axes shown are marked at intervals of 5 units.

Draw the parallelogram ABCD using the following co-ordinates:

- A – (25, 30)
- B – (10, -20)
- C – (-20, -25)
- D – (-5, 25)



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

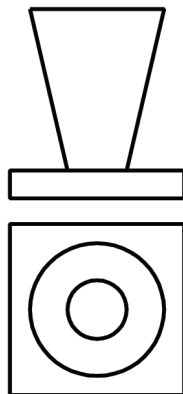


CAD commands: _____

9 The elevation and plan of a vase are shown.

In the space provided, draw a **freehand pictorial sketch** of the vase.

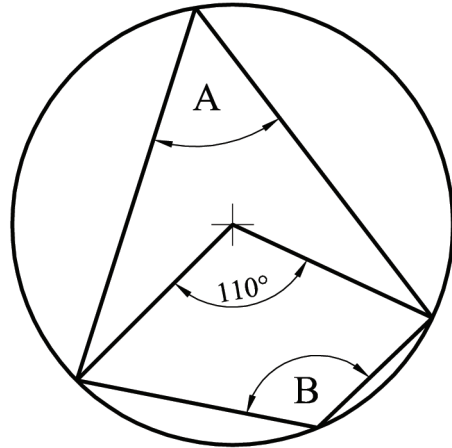
Colour **or** shade the sketch.



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

A = _____

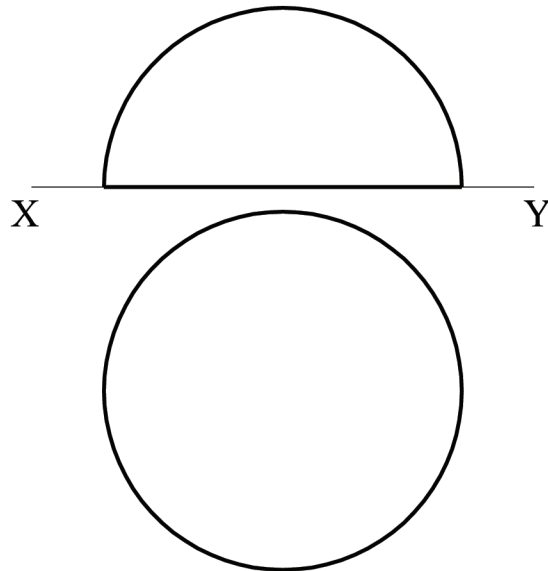
B = _____



11 A circular ring is placed on the hemisphere so that it rests in a horizontal position.

The ring has a diameter of 40 mm.

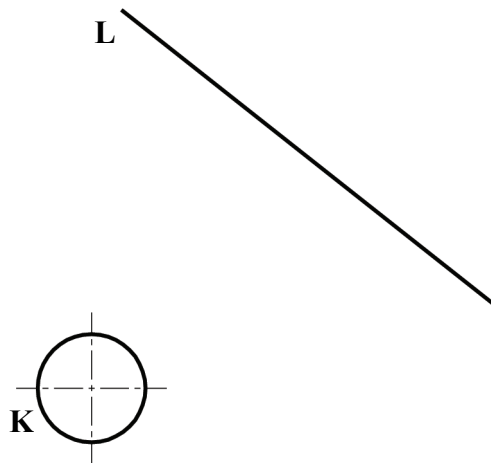
Draw the elevation and plan of the ring.



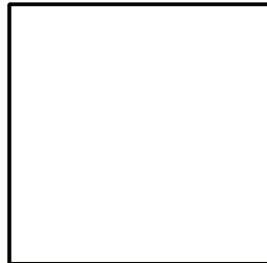
12 Draw:

1. the smallest and
2. the largest circles which will touch the given circle **K** and the line **L**.

Show all constructions and points of contact.

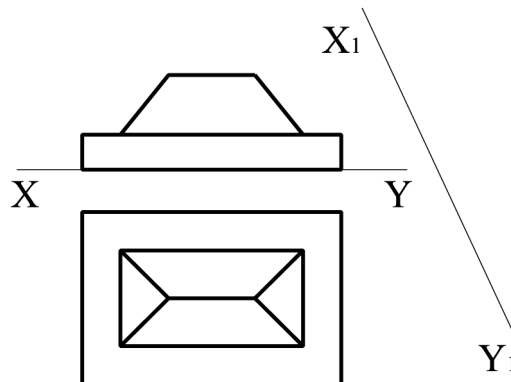


- 13** Convert the given square to an isosceles triangle of equal area.



- 14** The figure shows the elevation and plan of a toy boat.

Project an auxiliary elevation of the garden seat on the X_1Y_1 line shown.



- 15** A class of students were surveyed about their mobile phone providers.

The following are the results of the survey:

Vodafone: 40%, O2: 30%, Meteor: 20%, 3 Mobile: 10%

Divide the given rectangle to represent this information graphically.

Colour **or** shade the completed rectangle.



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