Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2010

Technical Graphics
Higher Level
Section A
(120 marks)

Monday, 21 June
Morning 9:30 - 12:30

Centre Number

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 examination number in the box provided below and on all other pages used.

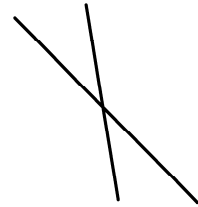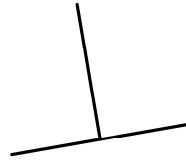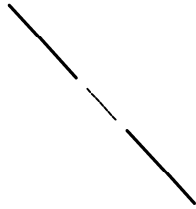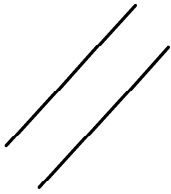| Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

Examination Number:

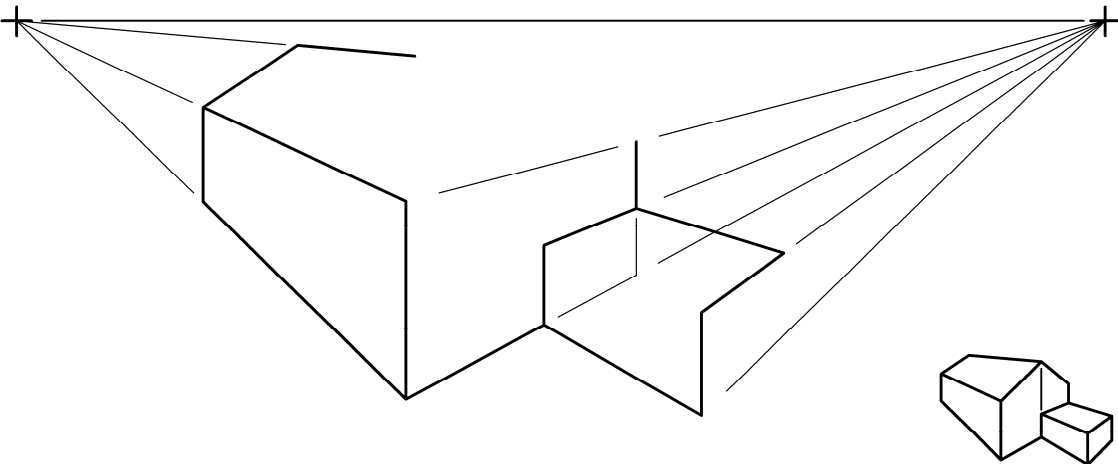**SECTION A**. Answer **any ten** questions. All questions carry equal marks.

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

- Collinear
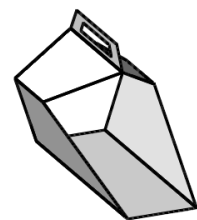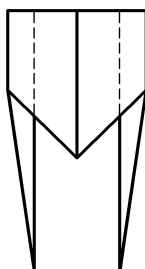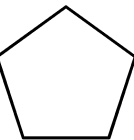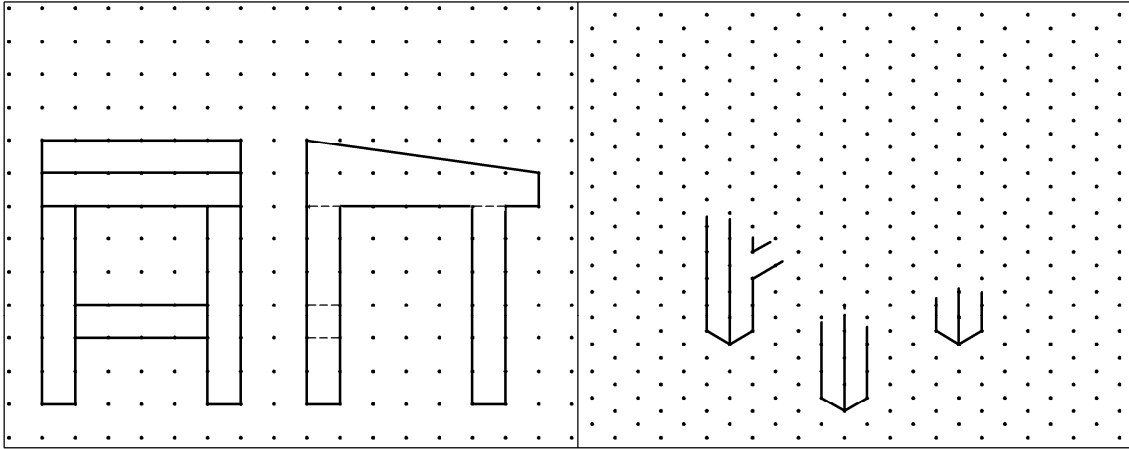- Intersecting
- Parallel
- Perpendicular

1 _____ 2 _____ 3 _____ 4 _____

2 The figure shows the incomplete perspective drawing of the outline of a house. A 3D graphic of the house is also shown. Complete the perspective drawing.
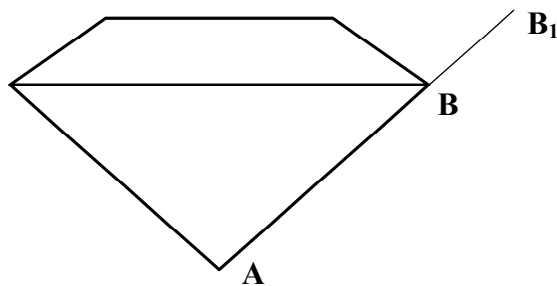
3 The figure shows the plan, elevation and a 3D graphic of a dust pan. Draw the development of the sides of the dust pan.
Note: It is not necessary to include the handle nor the back surface.

4 The elevation and end view of a writing desk are shown on the square grid.
Complete the pictorial sketch of the desk. Colour **or** shade the completed sketch.

5 The figure shows the logo for a jewellery shop.
Draw a new logo similar to the given logo with length **AB** increased to **AB₁**.
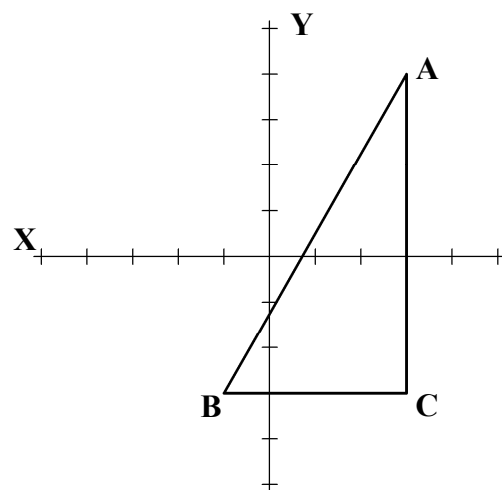
Colour **or** shade the new logo.

B₁

B

A

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

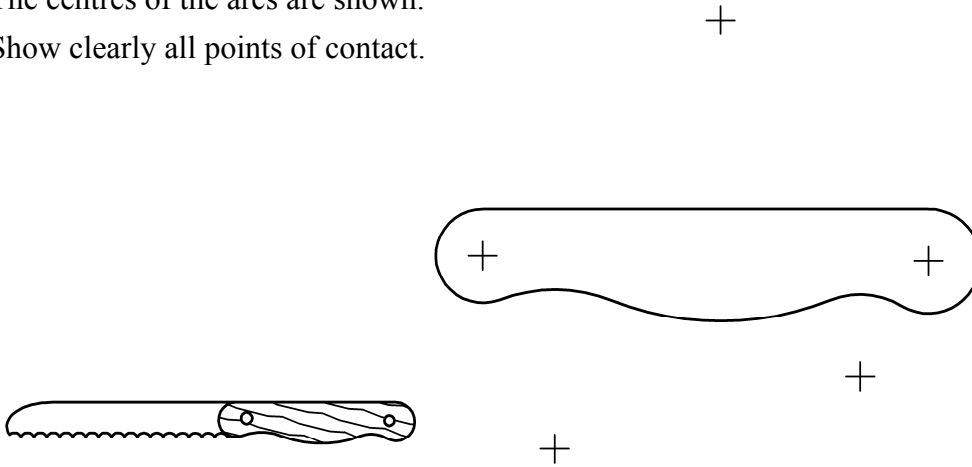Write down the coordinates of the vertices of the triangle **ABC**.
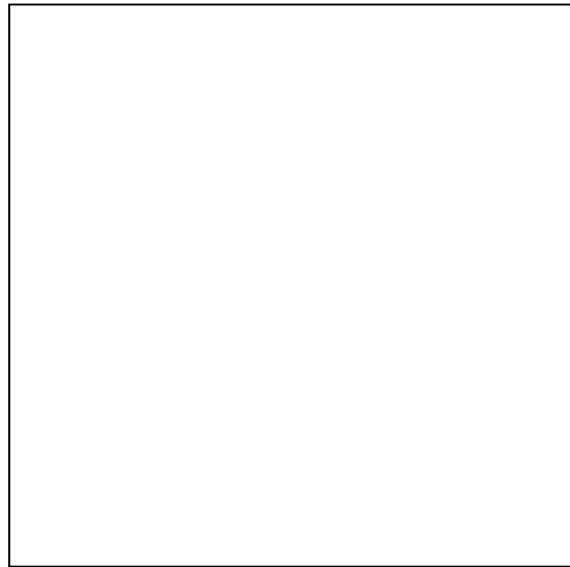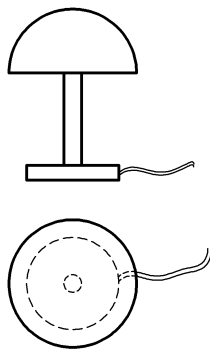
A _____

B _____

C _____

Y

A

X

B

C

7 The figure shows the design for a handle of a knife.

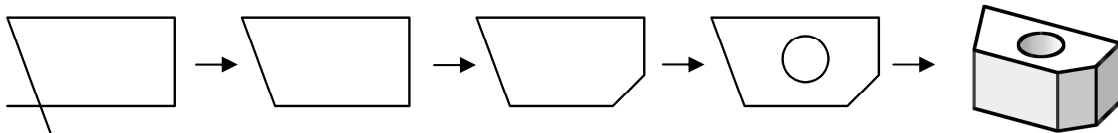The centres of the arcs are shown.

Show clearly all points of contact.

8 The plan and elevation of a desk lamp are shown.

In the space provided draw a **freehand pictorial sketch** of the desk lamp.

Colour **or** shade the sketch.

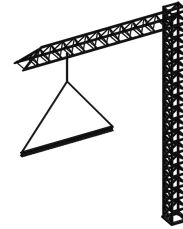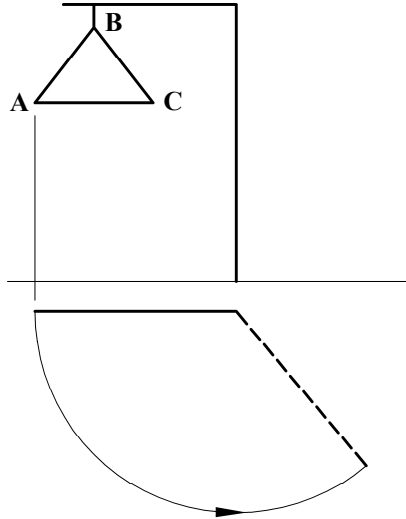**9** Write down **any three** CAD commands used to edit the figure shown in the sequence below.

Any **three** CAD Commands: _____

_____

_____

10 The figure shows the outline plan and elevation of a crane and a load **ABC**.
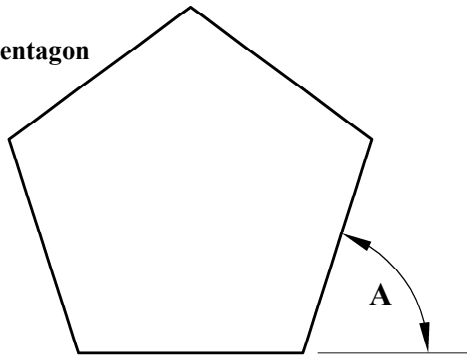
A 3D graphic of the crane and load is also shown.

Complete the elevation of the crane and the load in the rotated position as shown by the broken line in plan.
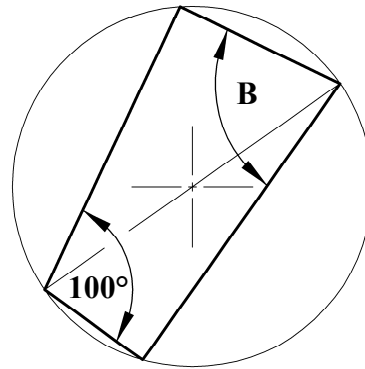
B

A C

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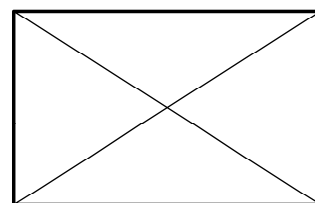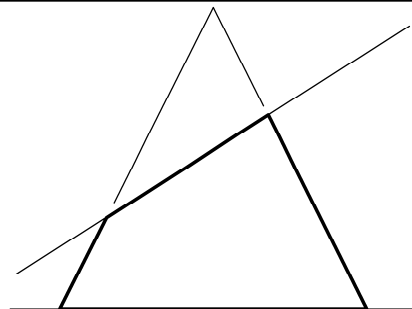
Regular pentagon

A
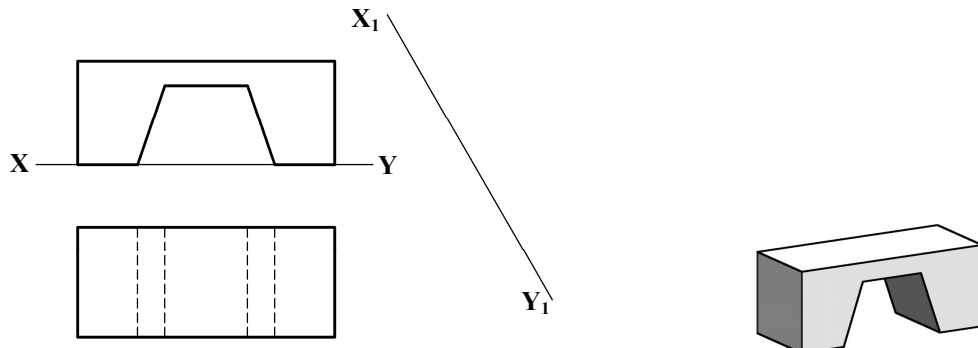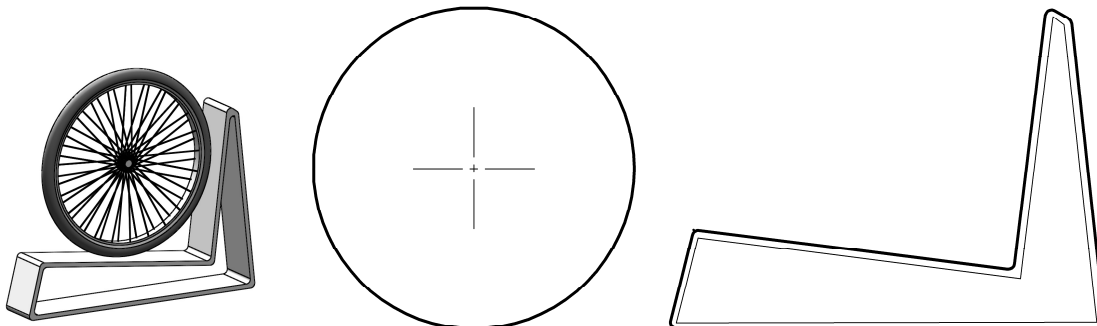
B

100°

A = _____

B = _____

12 Complete the plan of the truncated pyramid shown.

13 The figure shows the plan and elevation of a bridge.
A 3D graphic of the bridge is also shown.
Project an auxiliary elevation of the bridge on the X_1Y_1 line shown.

14 The figure shows the elevation of a bicycle rack and the wheel of a bicycle.
A 3D graphic of the wheel and rack is also shown.

Draw the wheel in position on the bicycle rack.
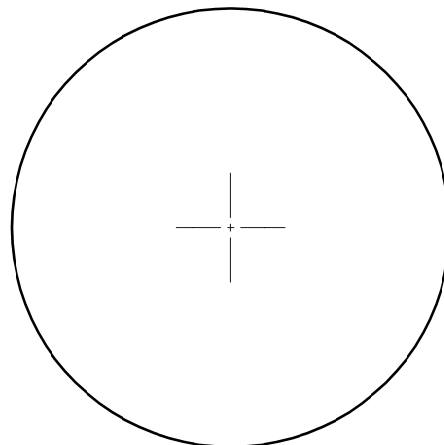Show all constructions and points of contact.

15 Twelve students were surveyed about their favourite sports.

The following were the results of the survey:

Football   - 6 students
Hurling   - 4 students
Basketball   - 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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