



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination 2007

Technical Graphics
Higher Level
Section A
(120 marks)

Monday 18 June
Morning 9:30 - 12:30

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.

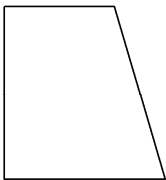
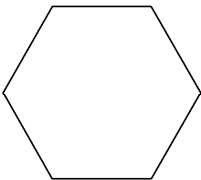
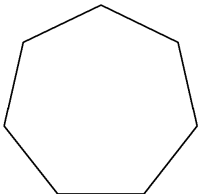
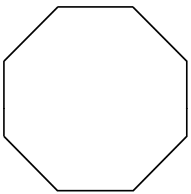
Examination Number:

Centre Number

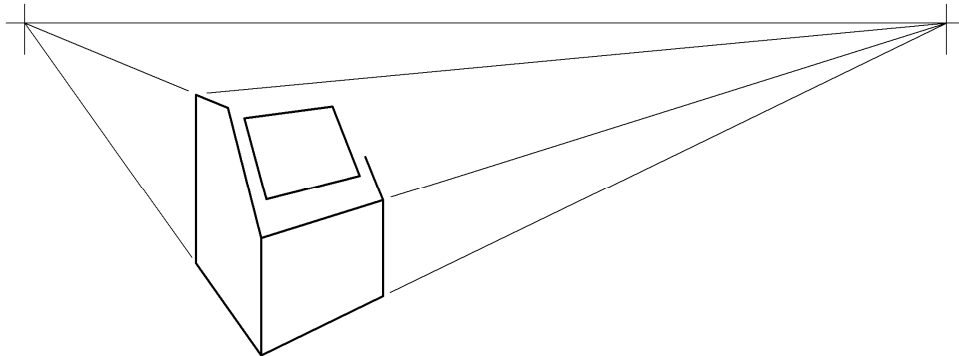
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

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

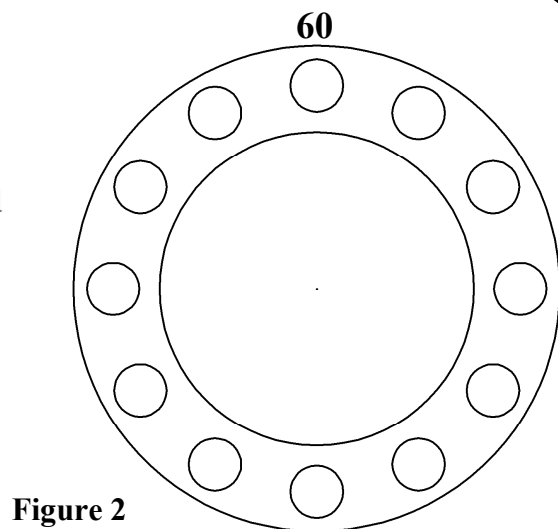
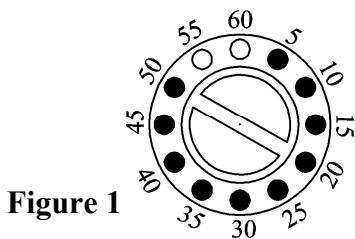
- 1.** Fill in the label for each diagram by selecting from the given table.

Table			
Hexagon	Octagon	Trapezium	Heptagon
			
1. _____	2. _____	3. _____	4. _____

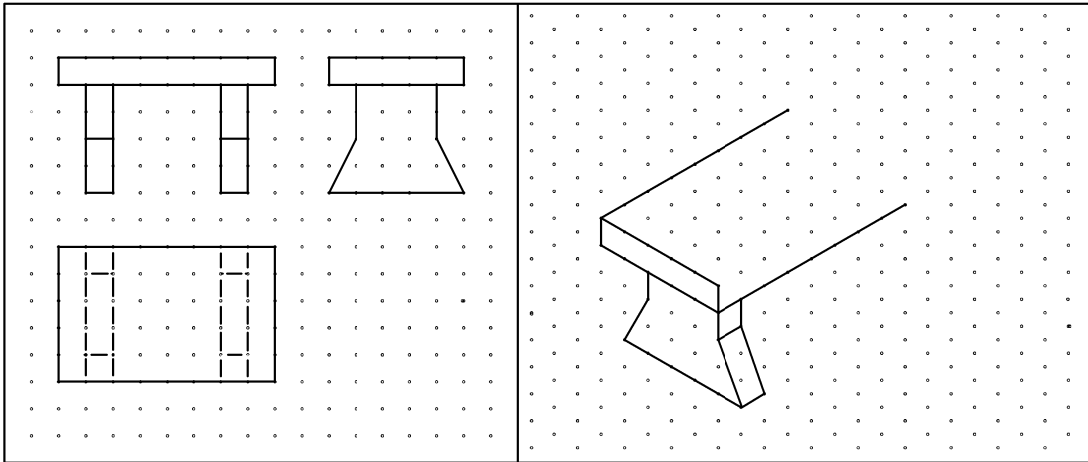
- 2.** The figure shows the horizon line, vanishing points and incomplete perspective drawing of a litter bin. Complete the perspective drawing.



- 3.** **Figure 1** below shows a timer for a microwave oven. The black buttons indicate a time period of 50 minutes.
- Shade **Figure 2** to indicate a time period of 25 minutes.

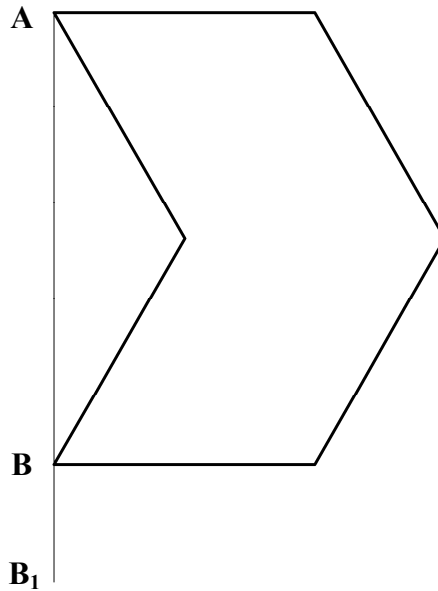


4. The elevation, plan and end view of a garden seat are shown on the square grid. Complete the pictorial sketch of the seat.



5. Draw a new logo similar to the given logo, when the height AB is increased to AB_1 .

Colour or shade the new logo.



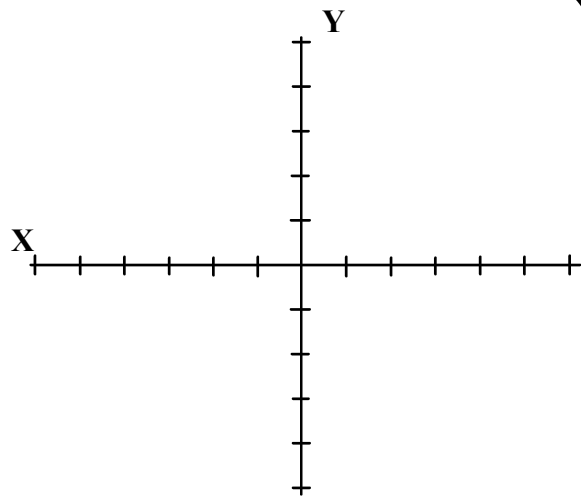
6. The X and Y axes shown are marked at intervals of 5 units.

Draw the triangle ABC using the following coordinates:

$A (15,5)$

$B (0,40)$

$C (-40,-10)$



7.

Twenty four students were surveyed about their favourite snacks.

The following are the results of the survey:

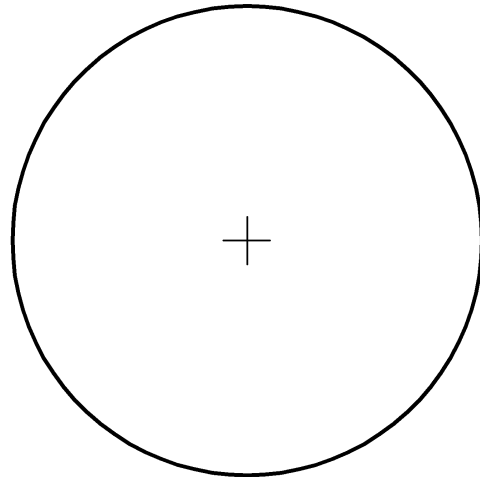
Fruit - 12 students

Chocolate - 9 students

Crisps - 3 students.

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

Colour **or** shade the completed pie chart.

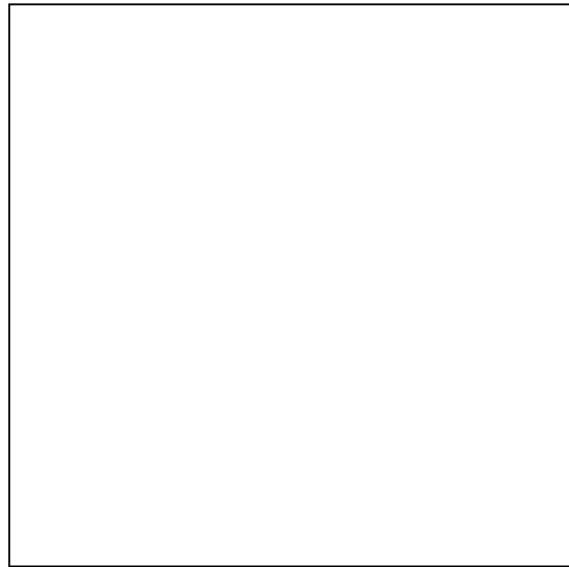
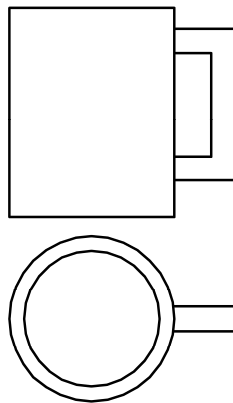


8.

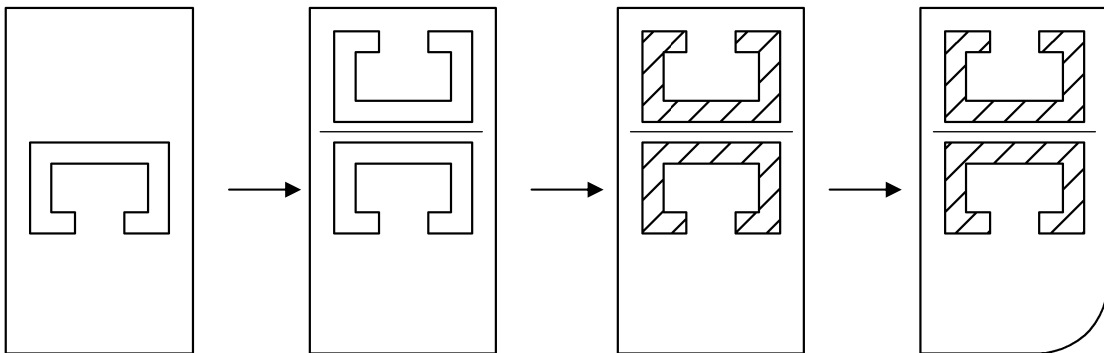
The elevation and plan of a mug are shown.

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

Colour **or** shade the sketch.



9. List the CAD commands used to edit the figure shown in the sequence below.



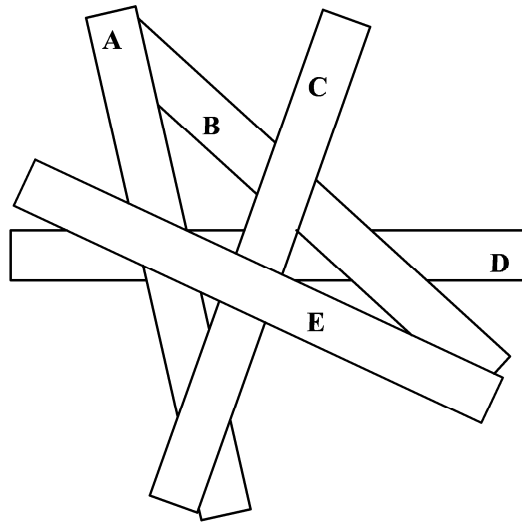
CAD Commands:

10. The figure shows a puzzle in which five strips of wood are stacked one on top of the other.

Strip **E** is on top as shown.

List the order in which they are stacked from the top down.

- 1- **E**
- 2-
- 3-
- 4-
- 5-

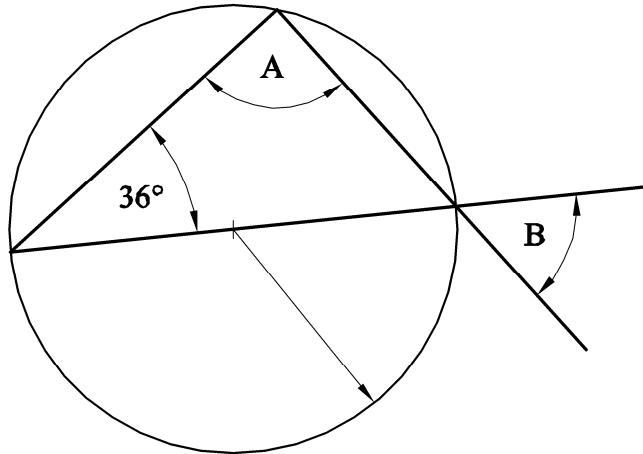


11.

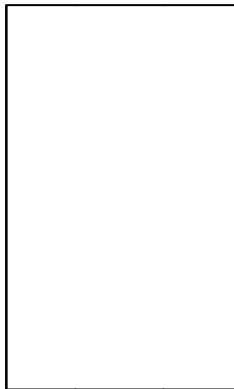
State the measure of the angles marked **A** and **B**.

A = _____

B = _____



12. The design shows the outline of a rectangular window. This window is to be replaced by a square window of equal area. Draw the outline of the square window showing all constructions.



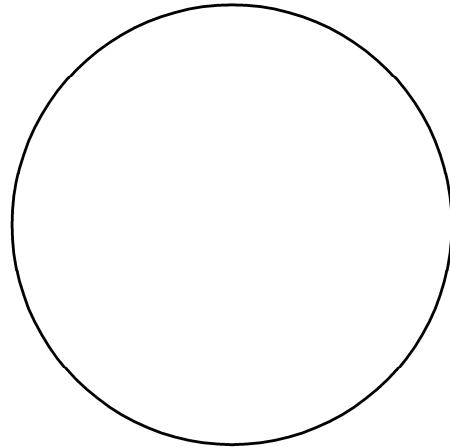
13.

The outline of a circular washer is shown.

A hole of radius 10mm is to be drilled through the centre of the washer.

Locate the centre of the washer and draw the hole.

All constructions must be clearly shown.

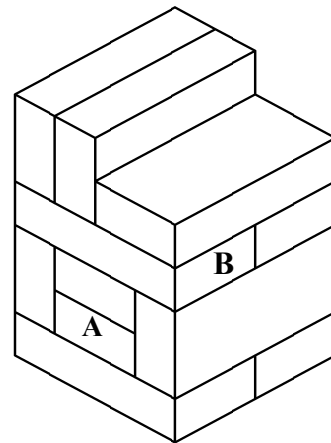


14.

The figure shows a wooden puzzle consisting of identical blocks. State the number of blocks in contact with the blocks marked **A** and **B**.

Block **A** is in contact with _____ other blocks.

Block **B** is in contact with _____ other blocks.

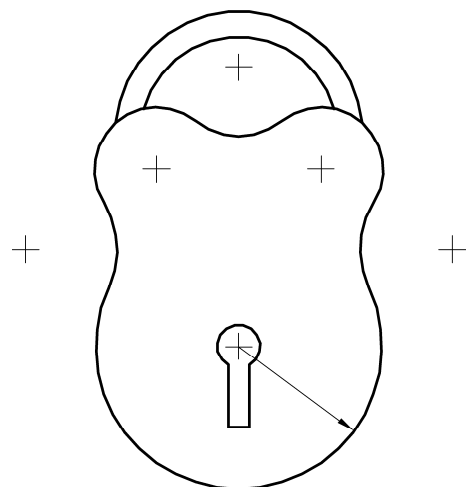


15.

The figure shows a lock consisting of lines and arcs.

The centres of the arcs are shown.

Indicate clearly the points of contact between the arcs.



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