



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination 2009

Technical Graphics
Higher Level
Section A
(120 marks)

Monday, 15 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:

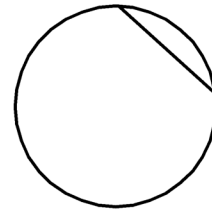
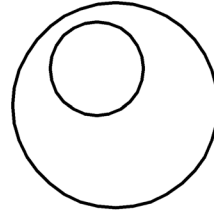
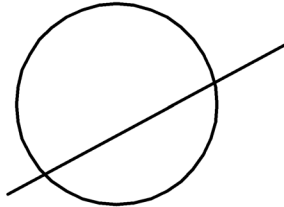
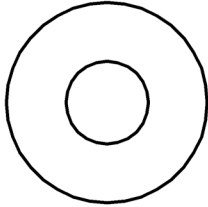
Centre Number

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

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

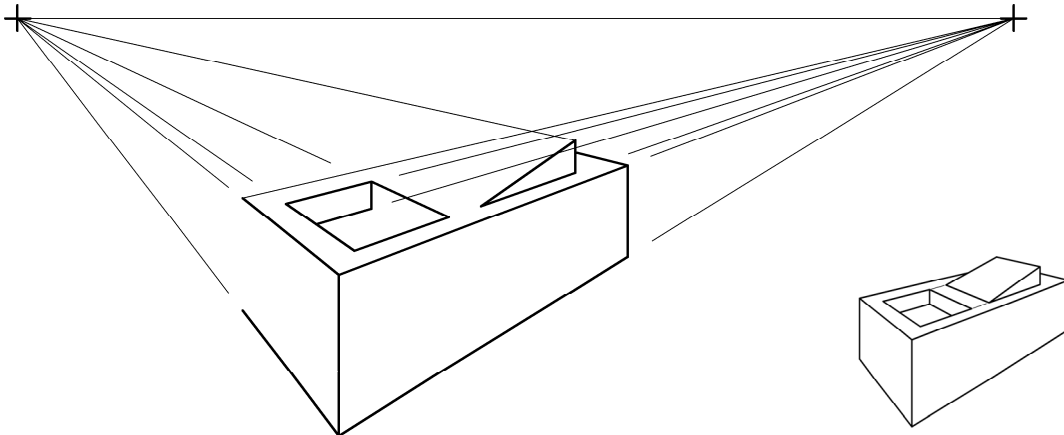
1 Fill in the label for **each** diagram by selecting from the list on the right.

- Eccentric
- Chord
- Secant
- Concentric



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

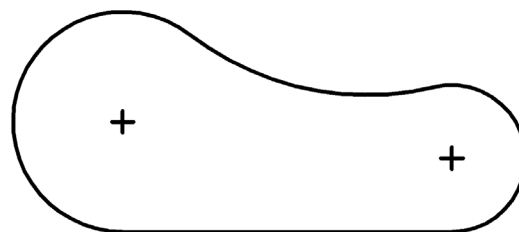
2 The figure shows the incomplete perspective drawing of a printer. Also shown is a 3D graphic of the printer. Complete the perspective drawing.



3 The figure shows a design for the sole of a shoe.

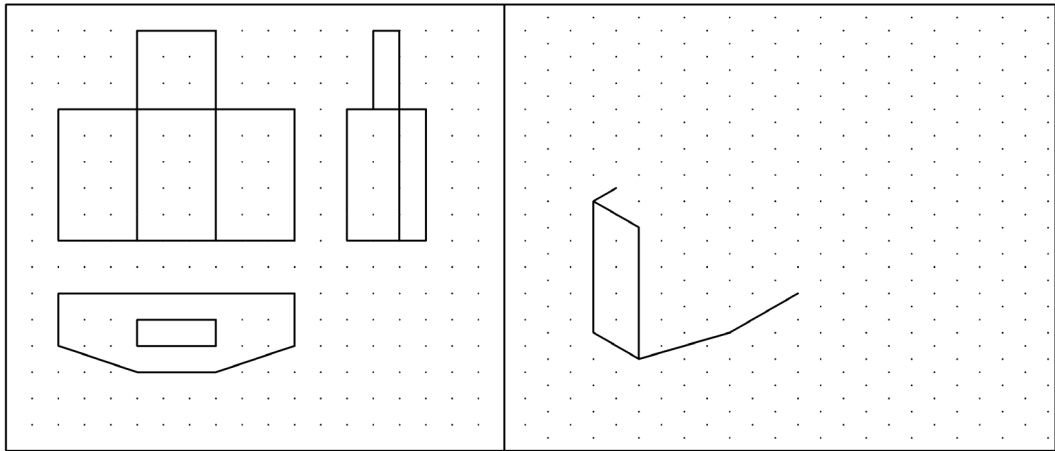
The centres of the arcs are shown.

Show clearly all points of contact.

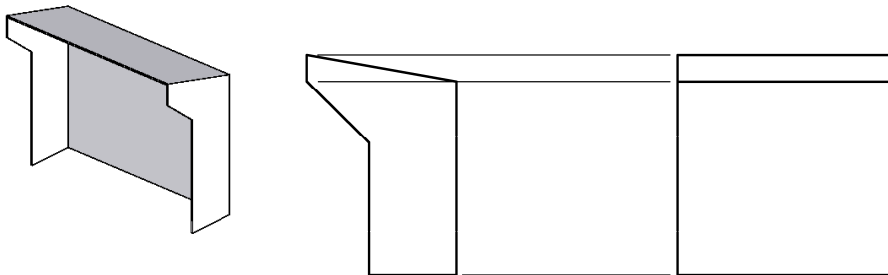


- 4 The elevation, plan and end view of a MP3 player and docking station are shown on the square grid.

Complete the pictorial sketch of the MP3 player and docking station.



- 5 The figure shows the elevation and end view of a bus shelter. Also shown is a 3D graphic of the bus shelter. Draw the development of the bus shelter.



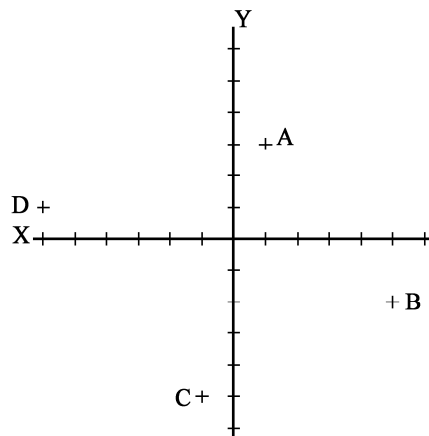
- 6 The X and Y axes shown are marked at intervals of 10 units. Write down the coordinates of the points marked A, B, C and D.

A: _____

B: _____

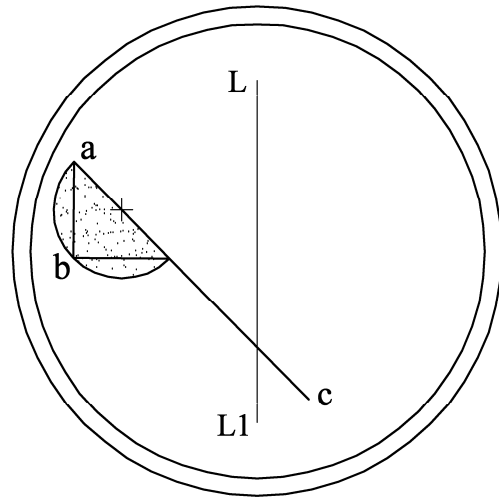
C: _____

D: _____

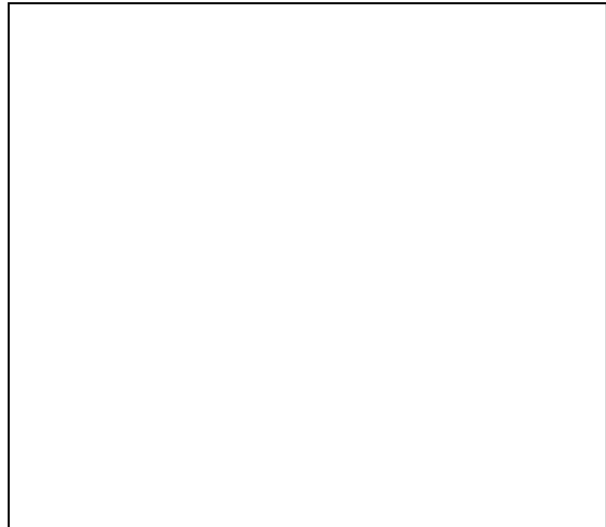
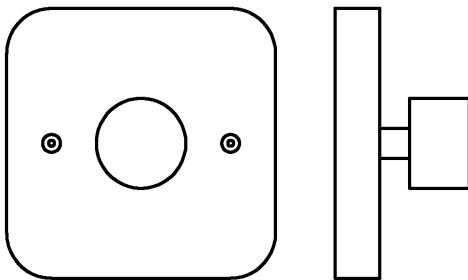


- 7 The figure shows an incomplete logo for a clothing company.

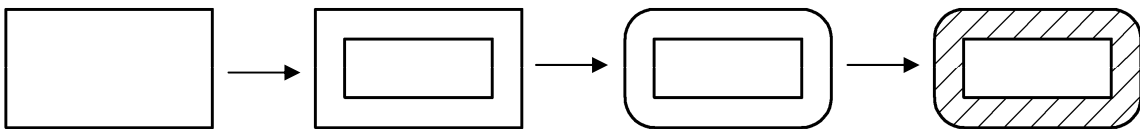
Complete the logo by constructing the image of the figure **abc** under an axial symmetry in the line **L-L1**.



- 8 The elevation and end view of a dimmer switch are shown.
Draw a **freehand** pictorial sketch of the switch in the space provided.
Colour **or** shade the sketch.



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

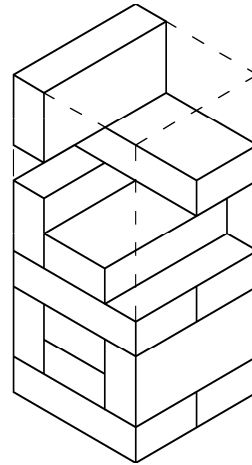


CAD commands: _____

10 The figure shows a wooden puzzle consisting of identical blocks.

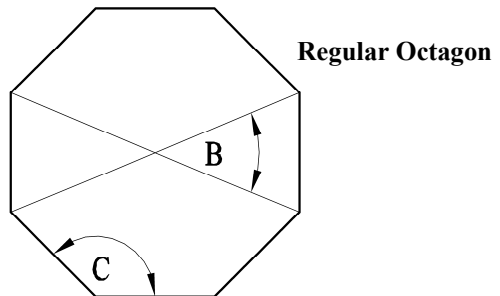
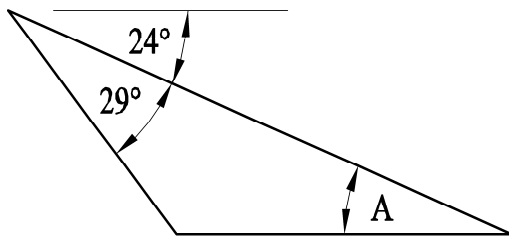
Determine the number of blocks required to complete the puzzle, as shown by the broken lines.

It will require _____ blocks to complete the puzzle.



11

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



A = _____

B = _____

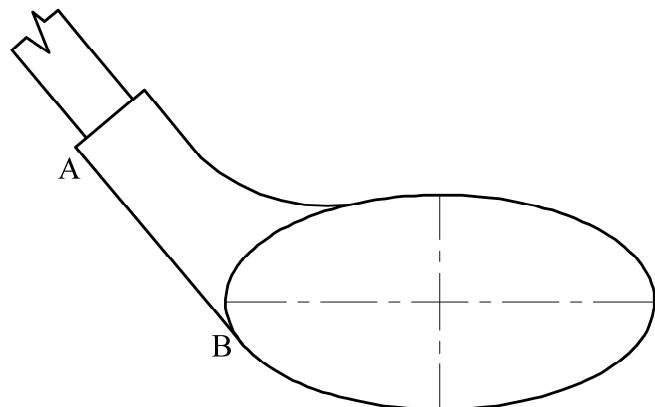
C = _____

12

A design for the head of a golf club is shown.

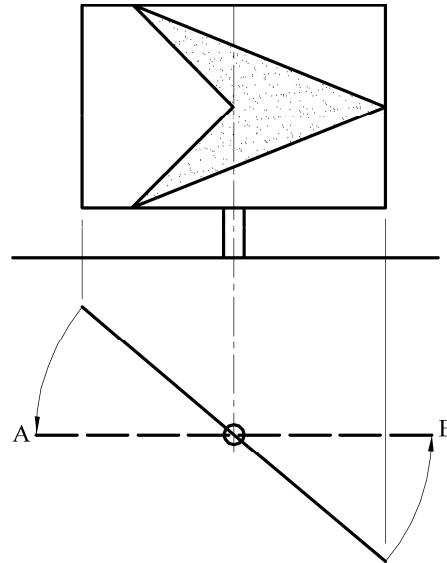
Locate the focal points of the ellipse and determine the point of contact between the tangent **AB** and the ellipse.

Show clearly all constructions.



13

Complete the elevation of the given road sign in its rotated position, as shown by the broken line **AB** in plan.

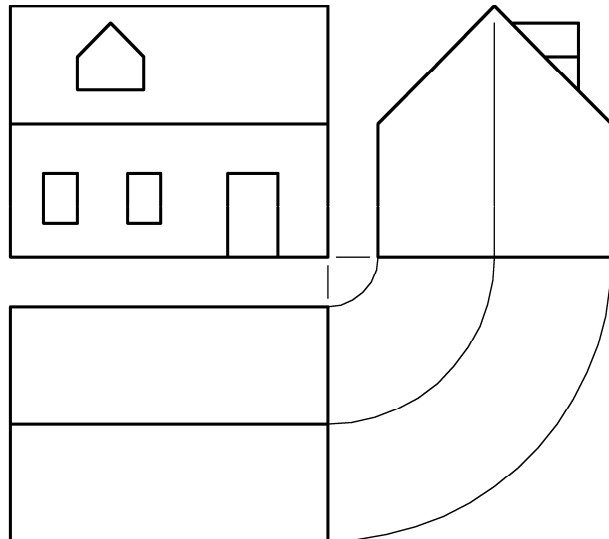
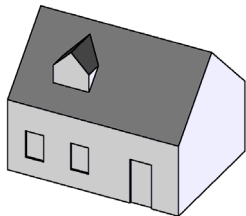


14

The figure shows the elevation, end view and incomplete plan of a model house with a dormer window in the roof.

Also shown is a 3D graphic of the model.

Complete the plan of the dormer window.



15

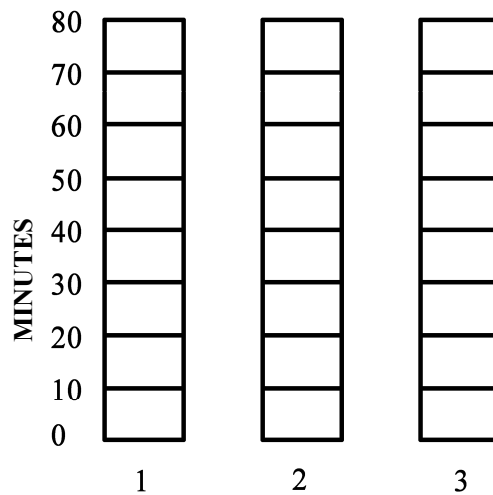
The figure shows three timer switches for an immersion heater. The switches are measured in minutes as shown.

Shade the switches to indicate the following time settings:

Switch 1 - 50 minutes

Switch 2 - 20 minutes

Switch 3 - 1 hour 10 minutes



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