



AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA S61A

A JUNIOR CERTIFICATE EXAMINATION, 2002
 TECHNICAL GRAPHICS — HIGHER LEVEL
 THURSDAY 13 JUNE — MORNING, 9.30 - 12.30
 TOTAL MARKS 400 (Sections A and B)

Examination Number 	Centre Stamp 
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INSTRUCTIONS

- (a) Answer any ten of the short answer questions in Section A (120 marks) using the spaces provided. All questions in Section A carry equal marks.
- (b) Answer any four of the six questions in Section B (280 marks). All questions in Section B carry equal marks.
- (c) Examination Number must be distinctly marked in the space provided above and on each sheet of paper used.
- (d) All construction lines must be clearly shown.
- (e) All measurements are in millimetres.
- (f) Hand up this answer book (Section A) at the end of the examination.

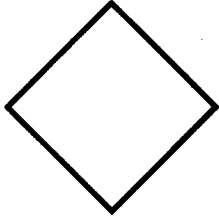
For Examiner's Use Only	
QUESTION	MARK
Section A (Total)	
Section B Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
TOTAL	⇒
GRADE	⇒

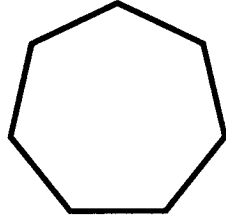
WARNING

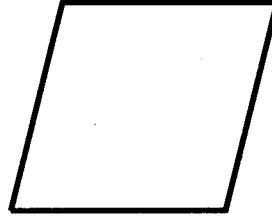
**THIS ANSWERBOOK MUST BE HANDED UP
 AT THE END OF THE EXAMINATION
 OTHERWISE MARKS WILL BE LOST.**

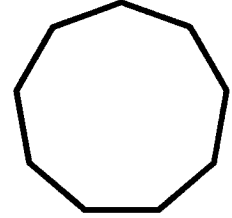
1. Correctly fill in the labels for each of the diagrams by selecting from the table shown.

TABLE			
Nonagon	Square	Heptagon	Rhombus

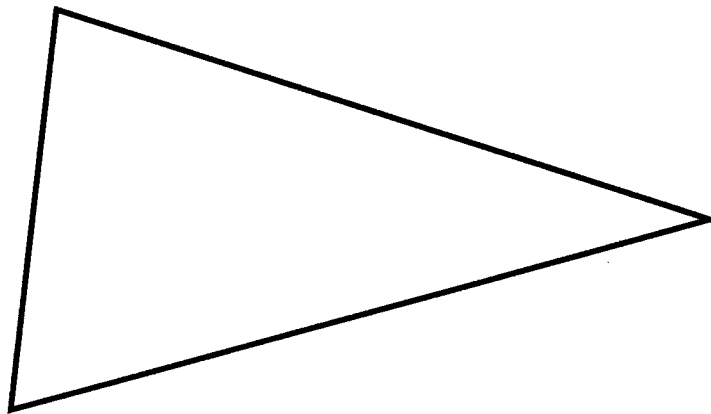




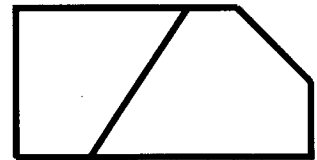
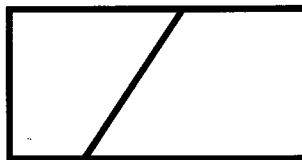




2. Inscribe a circle in the triangle shown. Determine the points of contact.

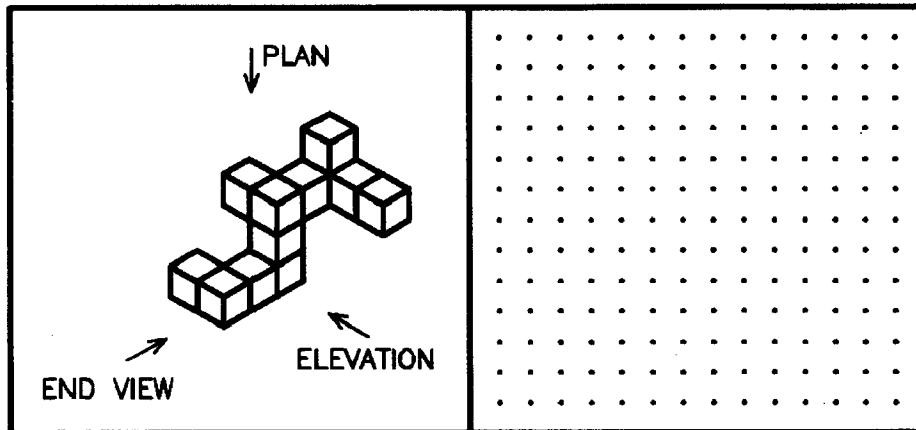


3. List the CAD commands used to edit the figure as shown in the sequence below.

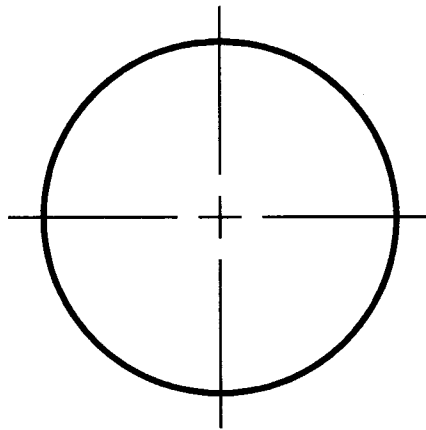


Editing commands used:

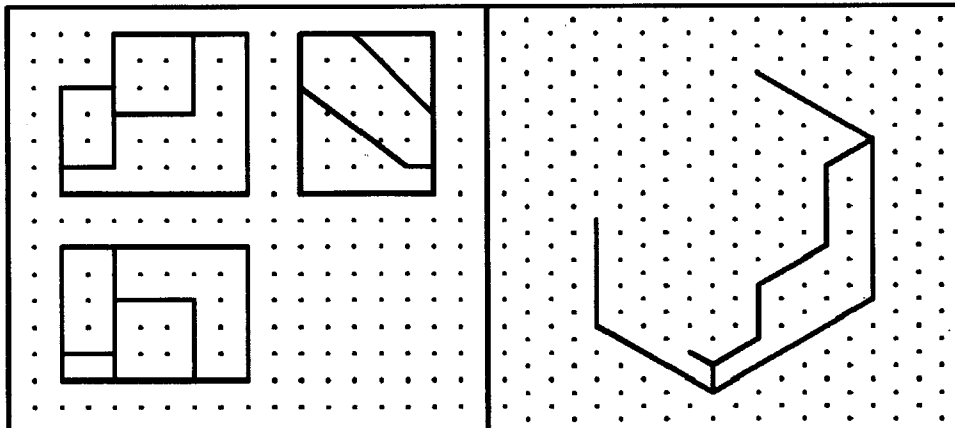
4. Using the square grid, sketch the orthographic views when viewed in the direction of the arrows.



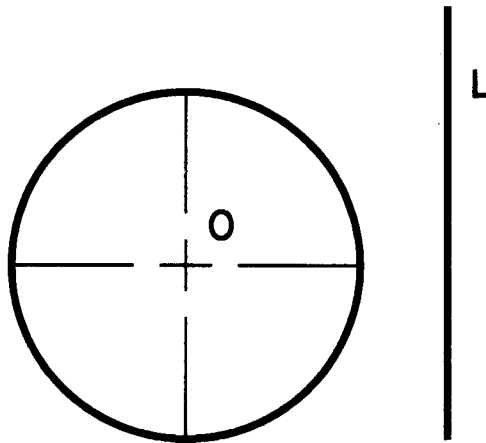
5. Inscribe a regular pentagon in the circle shown. Show all constructions required.



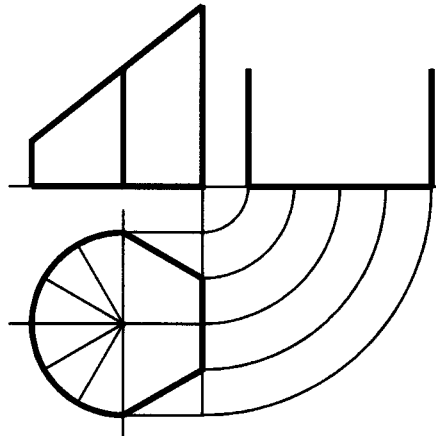
6. Shown on the square grid are three orthographic views of an object. The incomplete pictorial sketch of the object is shown on the isometric grid. Complete the pictorial sketch.



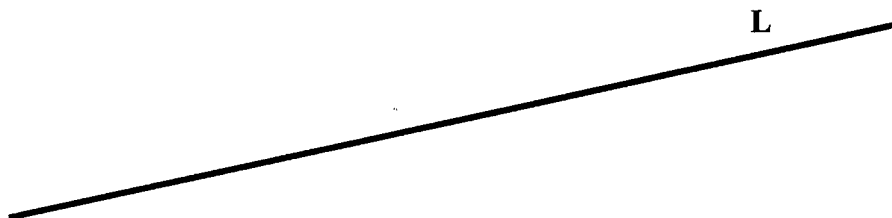
7. Shown is a circle with centre O and a line L. Locate a point P which is 10mm from the circumference of the circle and 15mm from the the line L.



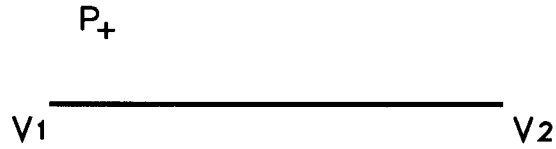
8. The elevation, plan and incomplete end view of a truncated solid are shown. Complete the end view.



9. Divide the given line L in the ratio 2:3:4

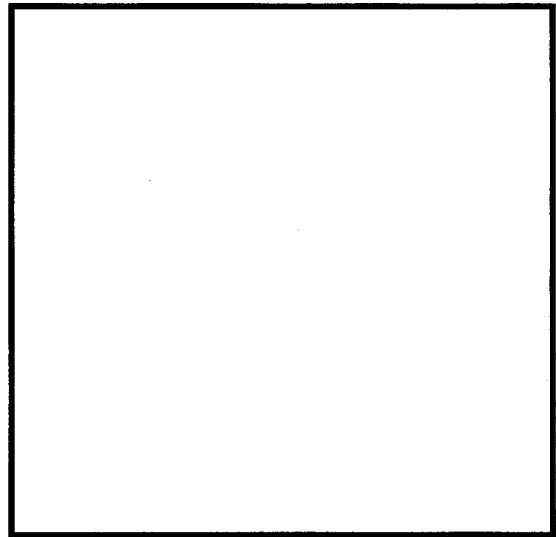
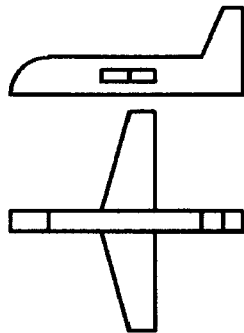


10. Shown is the major axis $V_1—V_2$ of an ellipse and a point P which lies on the curve. Draw the minor axis to show its correct position and length.

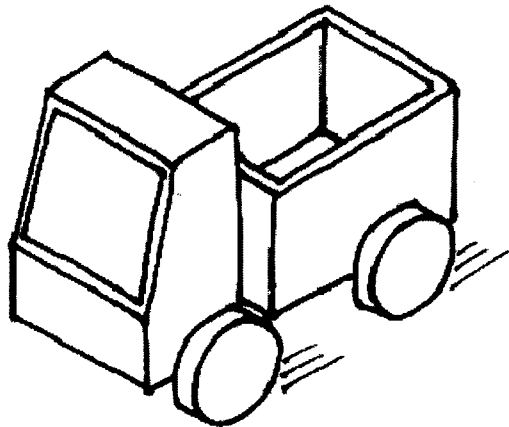


11. Shown is the elevation and plan of a model plane.

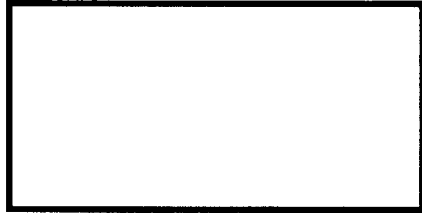
Make a freehand pictorial sketch of the model plane in the space provided.



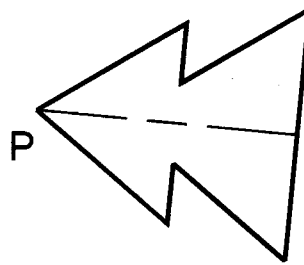
12. Apply shading to enhance the sketch of the toy truck shown.



13. Convert the given rectangle into a square of equal area.



14. Rotate the given figure anti-clockwise through 60° about point P.



15. The orthographic views of a shaped solid are shown. The sloping top surface has been indexed in plan. Index this surface in elevation and end view.

