A

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA   S61A

JUNIOR CERTIFICATE EXAMINATION, 2001

TECHNICAL GRAPHICS — HIGHER LEVEL

THURSDAY 14 JUNE — MORNING, 9.30 - 12.30

TOTAL MARKS 400 (Sections A and B)

Examination Number	Centre Stamp
☞	☞

INSTRUCTIONS

(a) Answer <u>any twelve</u> of the short answer questions in Section A (120 marks) using the spaces provided. All questions in Section A carry equal marks.

(b) Answer <u>any four</u> of the six questions in Section B (280 marks). All questions in Section B carry equal marks.

(c) Examination Number must be distinctly marked <u>in the space provided above</u> 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.
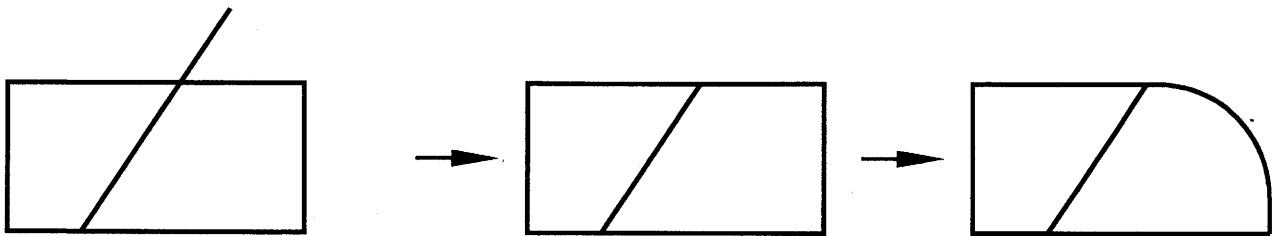
TABLE				
Acute	Equilateral	Isosceles	Obtuse	Scalene

_____   _____   _____   _____   _____
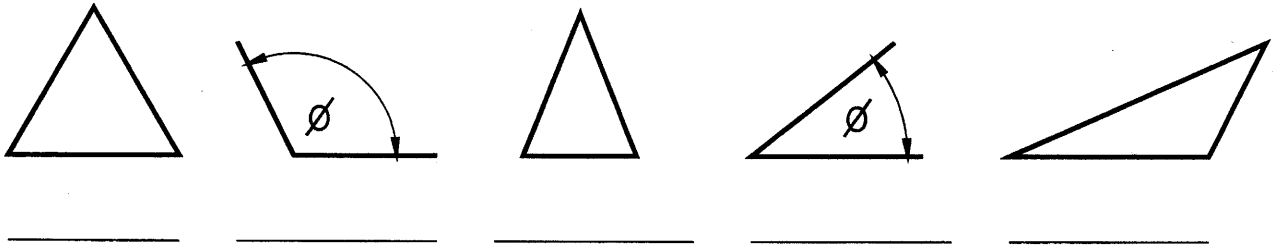
2. Construct a circle to pass through the three given points A, B and C.
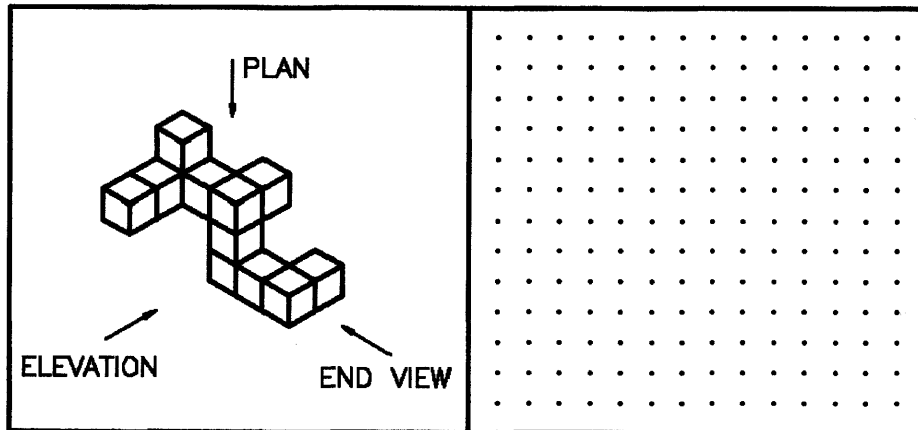
A
+

+B

C +
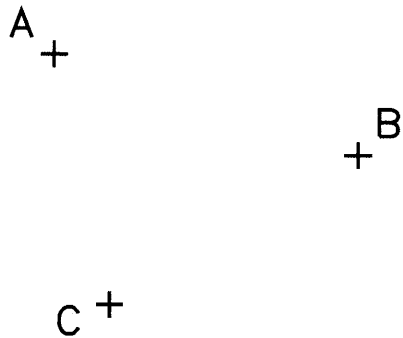
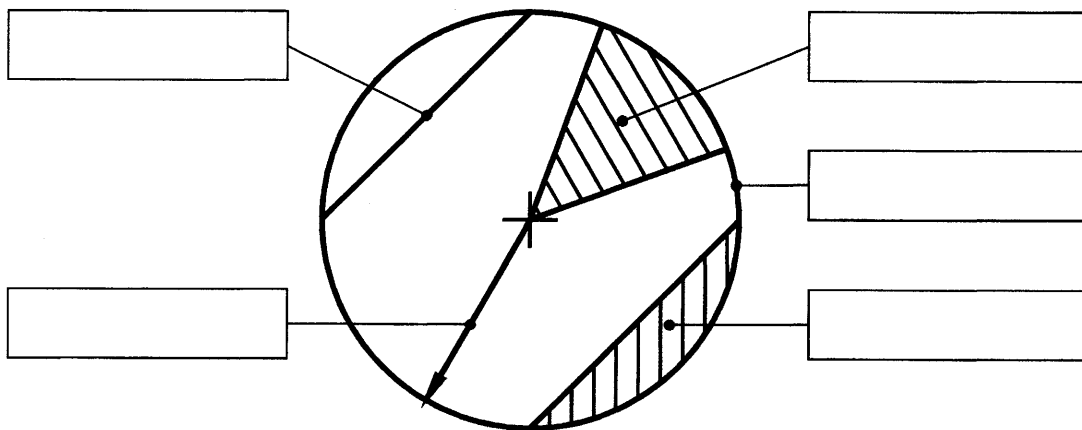**3.** List the CAD commands used to edit the figure as shown in the sequence below.
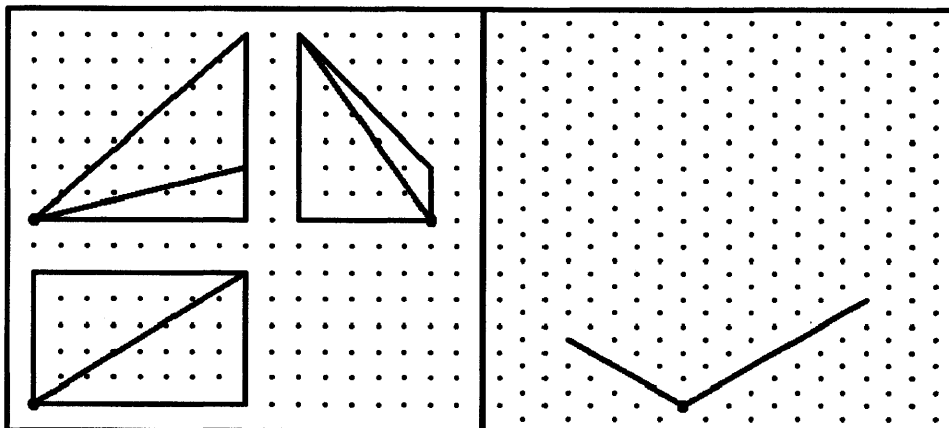
Commands used: _____   _____

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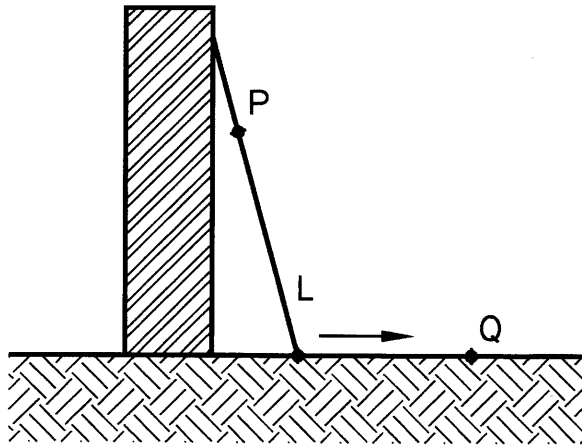
PLAN

ELEVATION

END VIEW

5. Label the parts of the circle shown.

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.
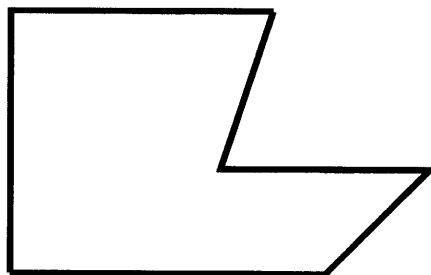
7. The line L represents a ladder leaning against a wall. Determine the location of the point P on the ladder when the base of the ladder is repositioned at Q.
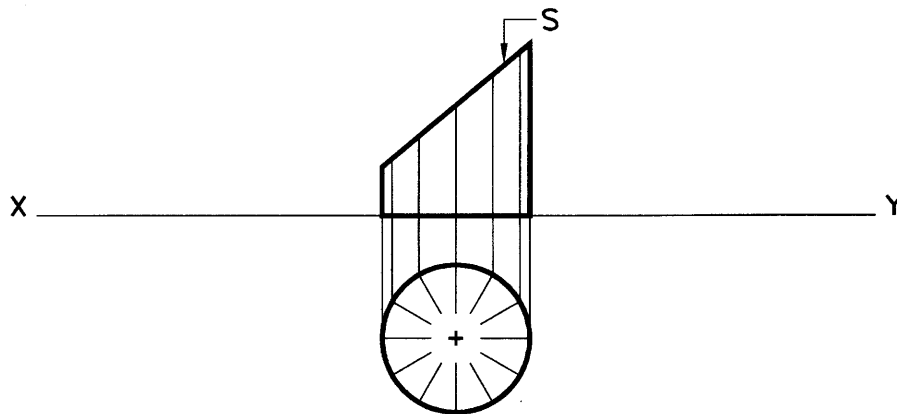
8. The projections of a pyramid are shown. Draw the development of the surface S.
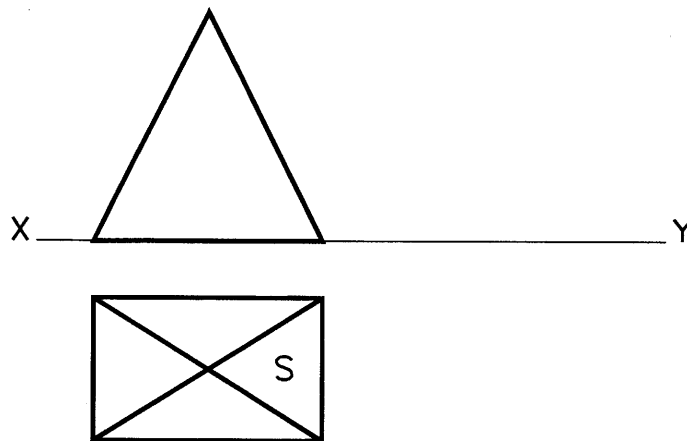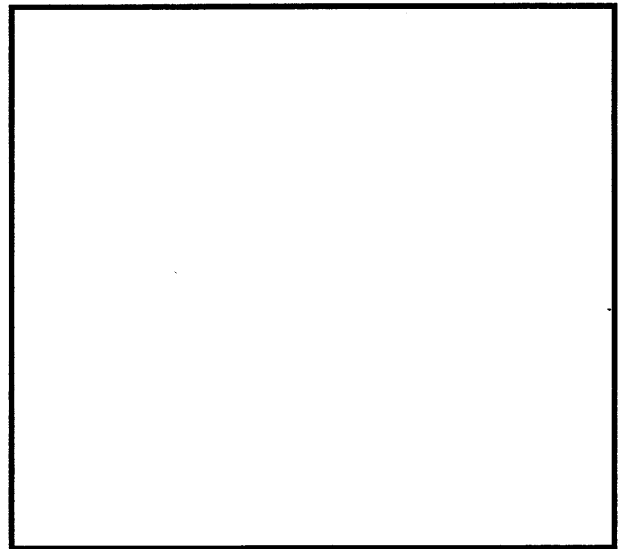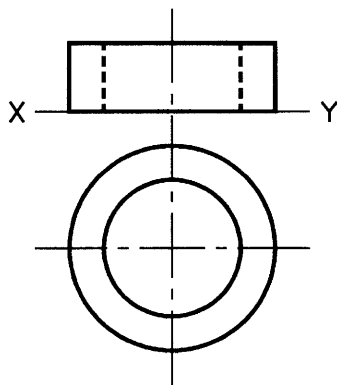
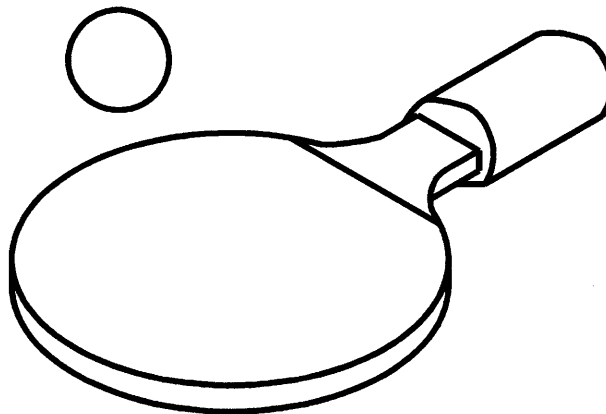**9.** Enlarge the sides of the given figure in the ratio 3:5.

10. The elevation and plan of a truncated cylinder are shown. Develop the true shape of the cut surface S of the cylinder.
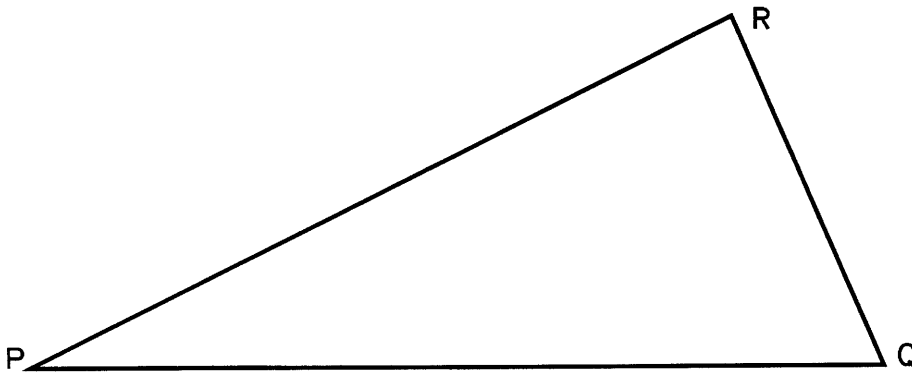
11. The elevation and plan of a ring are shown. Draw a **freehand** pictorial sketch of the ring in the space provided.
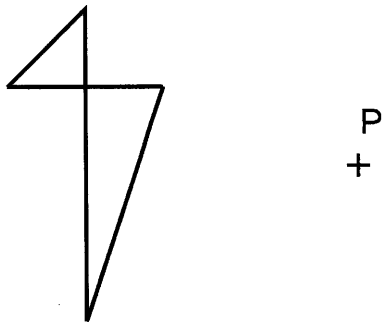
12. Apply shading to enhance the sketch of the table tennis bat and ball shown.

13. Draw a line from P which will divide the area of the triangle PQR into two equal parts.

R

P   Q

14. Draw the image of the figure under central symmetry in point P.

P
+

15. The elevation and plan of a truncated pyramid are shown. All points in plan have been indexed. Correctly index the elevation.

X   Y

c   b

f   e

d

a