**An Roinn Oideachais agus Eolaíochta**

S 60 A

# JUNIOR CERTIFICATE EXAMINATION, 1998

12019

A

## TECHNICAL GRAPHICS — ORDINARY LEVEL

### THURSDAY 18 JUNE — AFTERNOON, 2.00 — 4.30

### TOTAL MARKS 400 (Section A and B)

| EXAMINATION NUMBER ☞ | |
| --- | --- |
| CENTRE STAMP ☞ | |

## NSTRUCTIONS

(a) Answer <u>any ten</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 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.

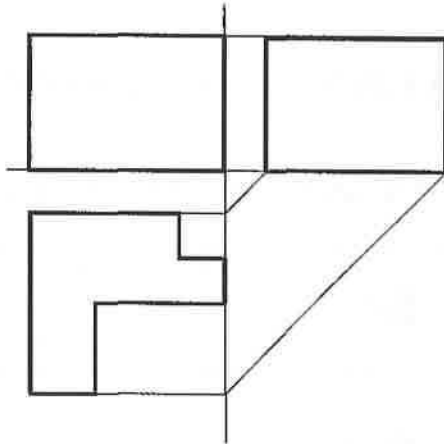(f) Hand up this answer book (Section A) at the end of the examination.

| For Examiner's use only | |
| --- | --- |
| QUESTION | MARK |
| Section A (Total) | |
| Section B   Q1 | |
| Q2 | |
| Q3 | |
| Q4 | |
| Q5 | |
| Q6 | |
| TOTAL ☞ | |
| GRADE ☞ | |

**1** Draw the missing lines in the elevation and in the end elevation.

**2** In each of the examples below, name <u>ONE</u> CAD command which will result in the original drawing changing to **Step 1** and **Step 2**.
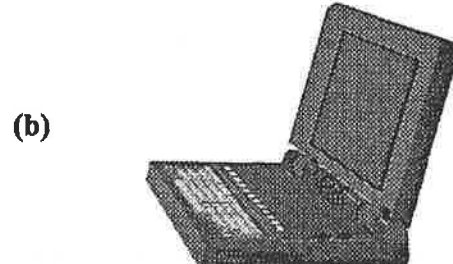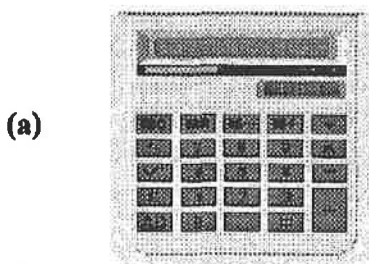
**Original Drawing**

**Step 1**

**Step 2**
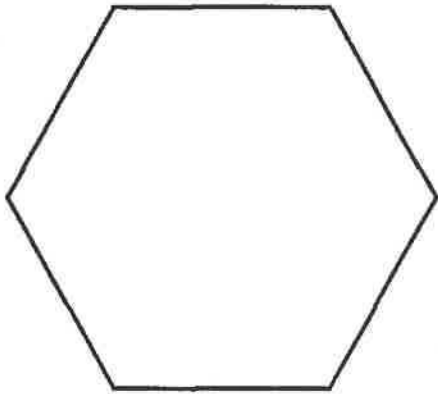
Step 1 = _____     Step 2 = _____

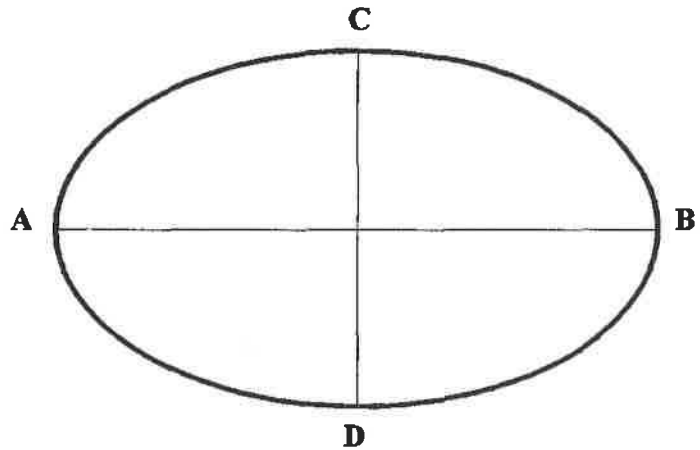**3** Identify the components at (a) and (b), below.

(a)     (b)

(a) _____     (b) _____

**4**  Convert the area of the given HEXAGON to a RECTANGLE of equal area.
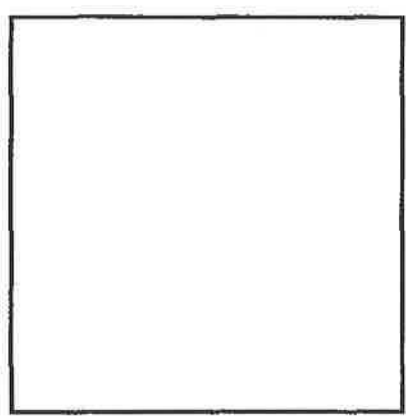
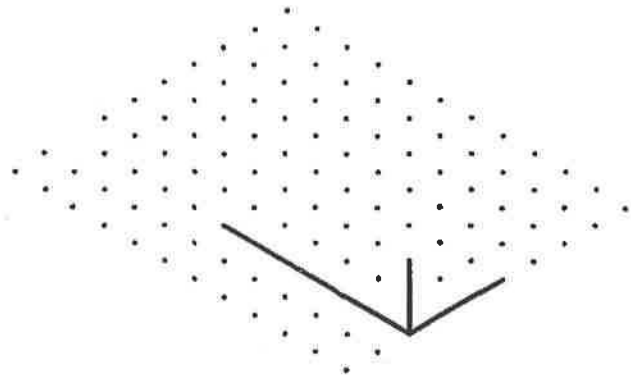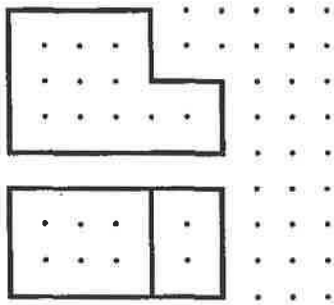**5**  Given is an ELLIPSE. Name the lines AB and CD. Locate the FOCAL POINTS.

C

A                    B

D

AB is _____

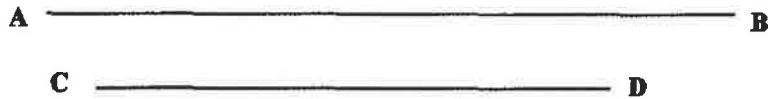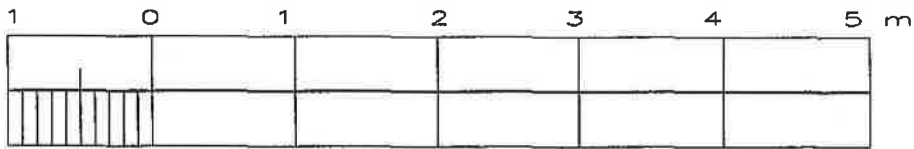_____

CD is _____

_____

**6**  Inscribe a regular OCTAGON in the given SQUARE.

**7** Shown is the elevation and plan of a solid. Complete the isometric view of the solid.

**8** Using the scale provided, measure the lines AB and CD and state their lengths.

A ——————————————————————— B
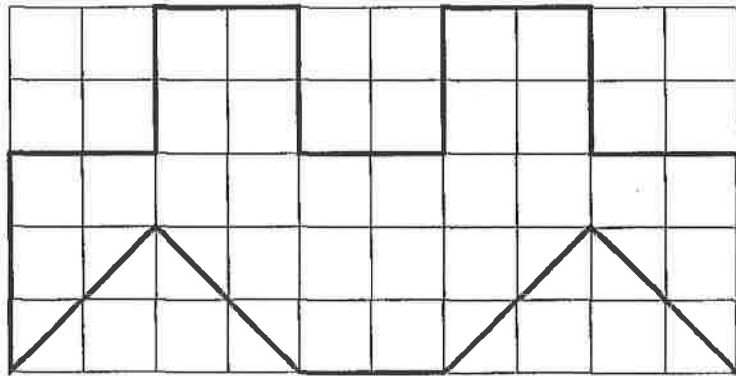
C ——————————————— D

AB = _____     CD = _____

**9** Determine the area of the irregular figure in square units.
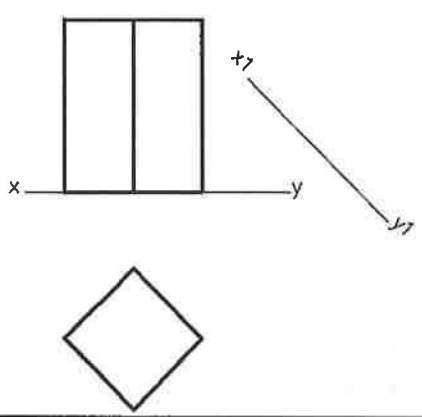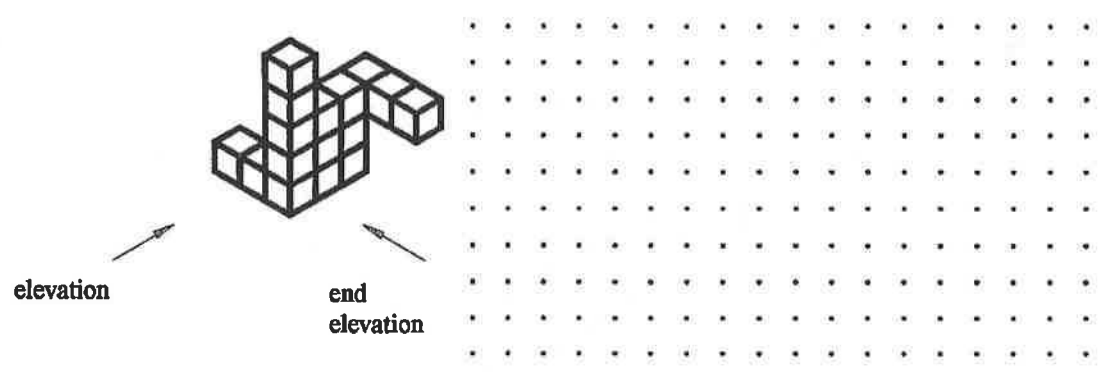
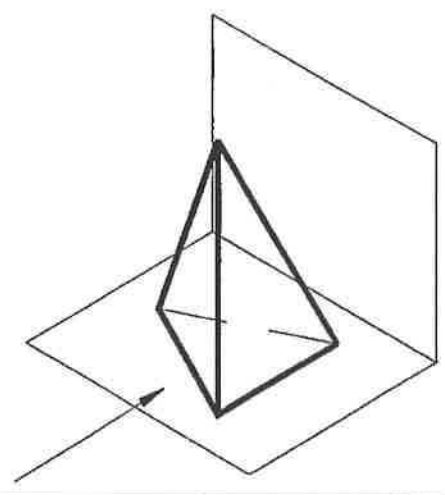1 square

= 1 x 1 Unit.

Ans :- _____

**10** Shown is the elevation and plan of a square based prism.
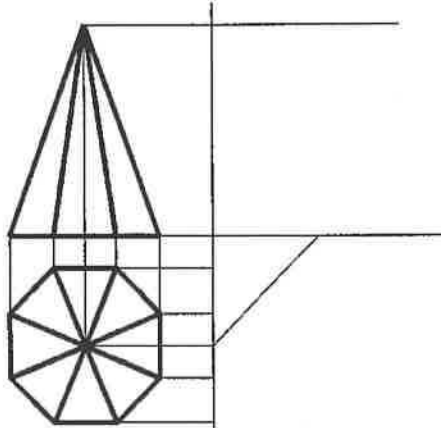Project the AUXILIARY ELEVATION, in the position shown.

**11** Using the grid provided, sketch the orthographic views indicated by the arrows.
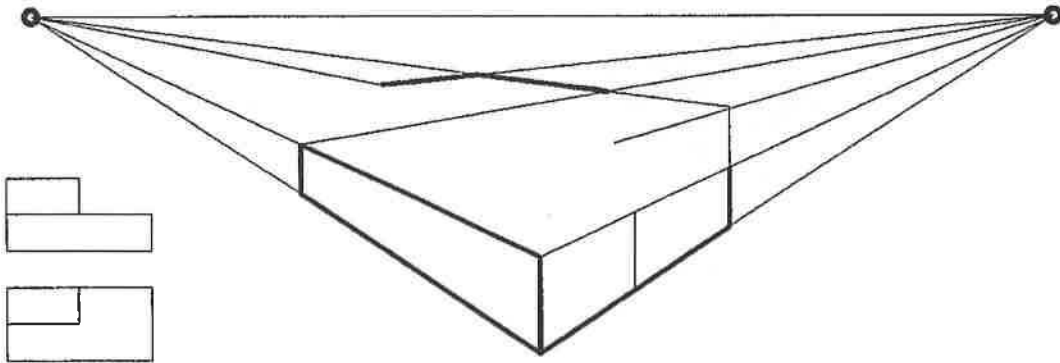
elevation

end
elevation

**12** Sketch the SHADOW cast by the SOLID when the light source is as shown.

**13** Shown is the elevation and plan of a regular OCTAGONAL PYRAMID. Draw the end elevation.

**14** The figure shows the TWO POINT perspective view of a solid. Complete the view.

**15** Rotate the given figure, about point O, through 180°.

O