

An Roinn Oideachais agus Eolaíochta

S 60 A

A JUNIOR CERTIFICATE EXAMINATION, 2002
TECHNICAL GRAPHICS — ORDINARY LEVEL
THURSDAY 13 JUNE - MORNING, 9.30 — 12.00
TOTAL MARKS 400 (Section A and B)

EXAMINATION NUMBER CENTRE STAMP **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

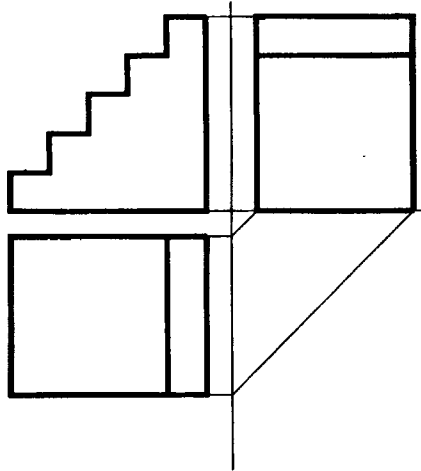
QUESTION	MARK
Section A (Total)	
Section B Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
TOTAL 	
GRADE 	

WARNING

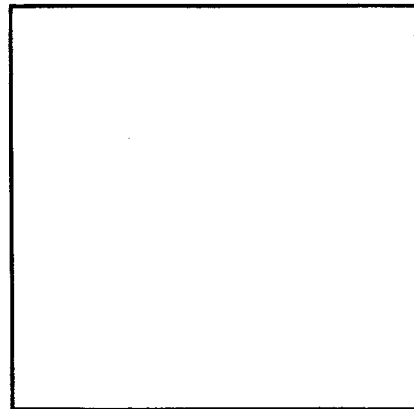
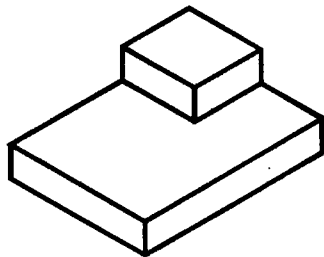
**THIS ANSWERBOOK MUST BE HANDED UP
 AT THE END OF THE EXAMINATION
 OTHERWISE MARKS WILL BE LOST.**

SECTION A ANSWER ANY TEN QUESTIONS - ALL QUESTIONS CARRY EQUAL MARKS

1 Shown is the elevation, plan and end view of a set of steps.
Insert the lines omitted in the end view and in the plan.

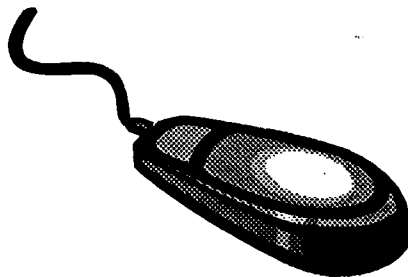


2 Make a freehand pictorial sketch of the blocks in the space provided.

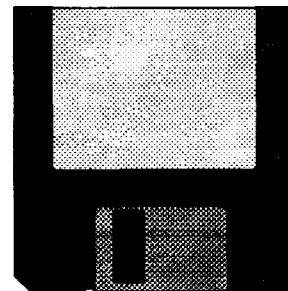


3 Identify the computer components shown at **A** and **B**, below.

A



B

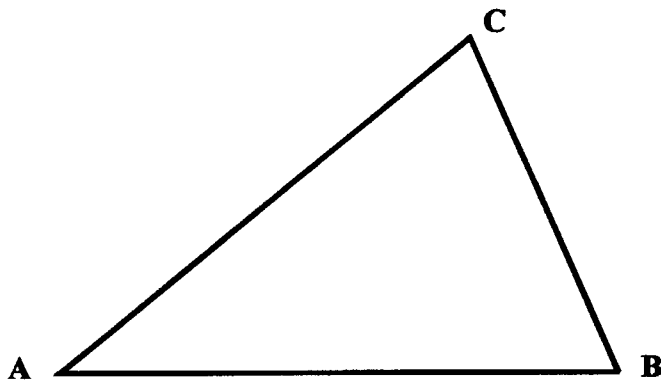


A = _____

B = _____

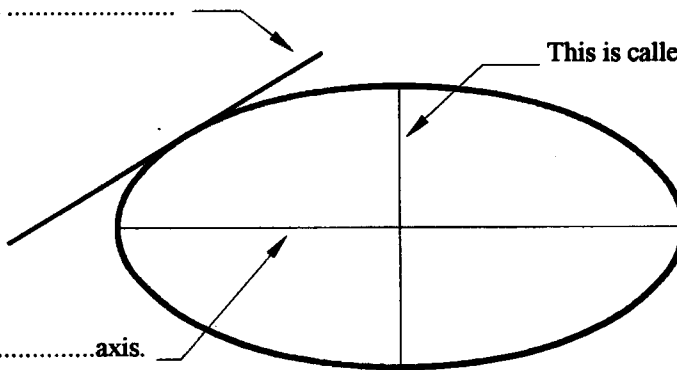


4 Convert the area of the triangle ABC, to a rectangle of equal area.



5 Fill in the missing words in the sentences below.

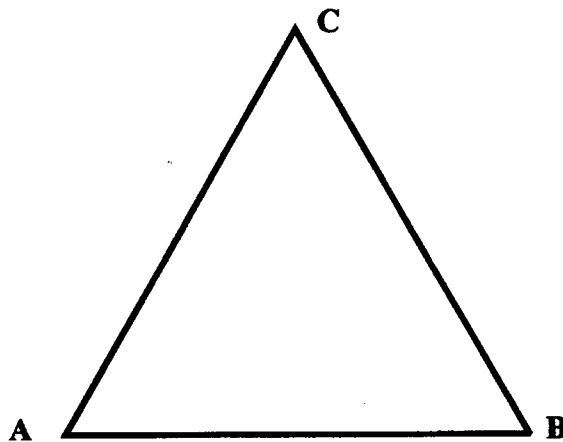
This line is called a



This is called the.....axis.

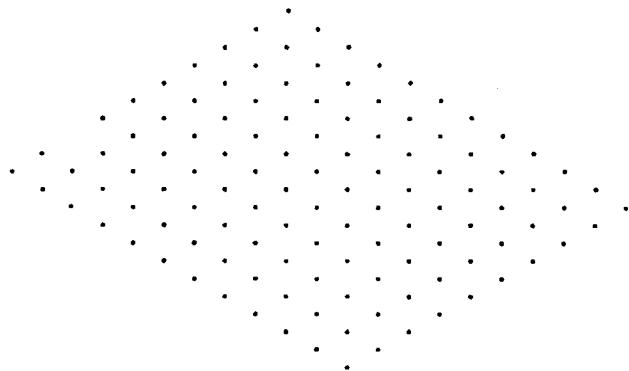
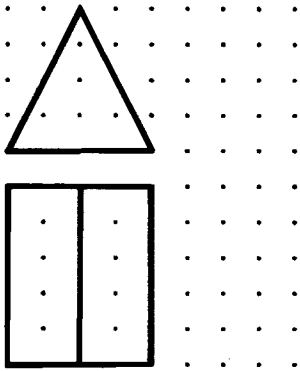
This is called the.....axis.

6 Inscribe a circle, to make contact with all sides, in the triangle ABC.



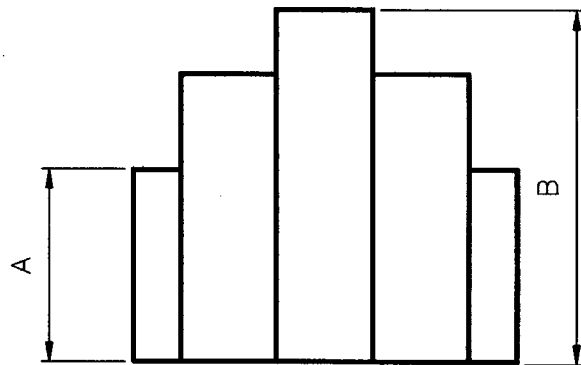
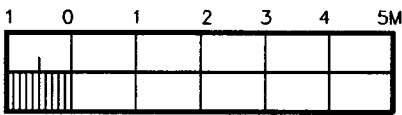
7

The elevation and plan of a tent are shown.
Draw an isometric view of the tent, on the grid provided.



8

Using the scale provided, measure and record the dimensions A and B.



A = _____

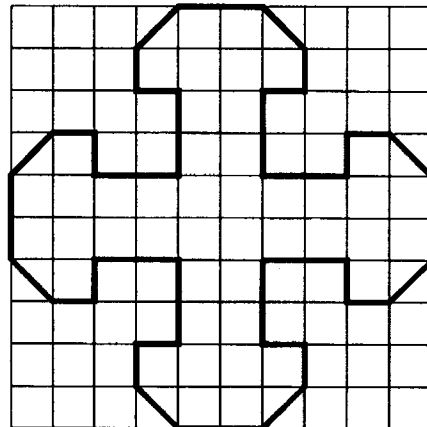
B = _____

9

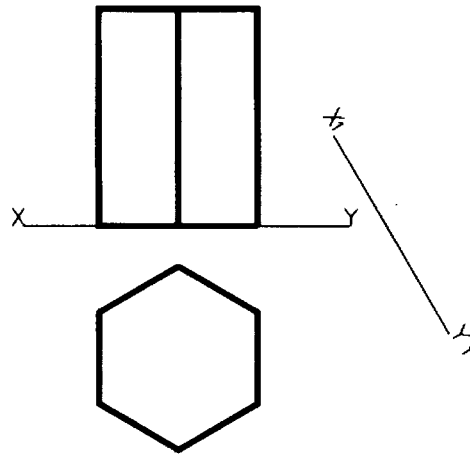
Record the area of the figure in square units.

Note: 1 square = 1 x 1 Unit.

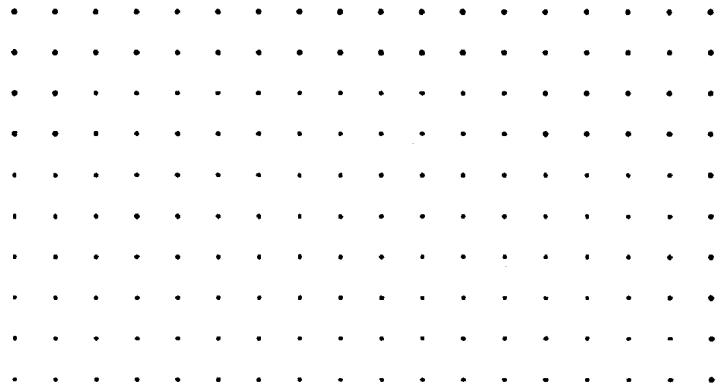
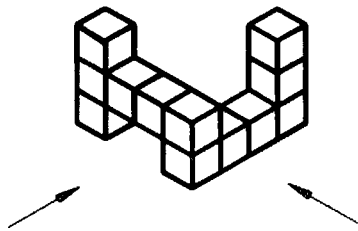
Area = _____



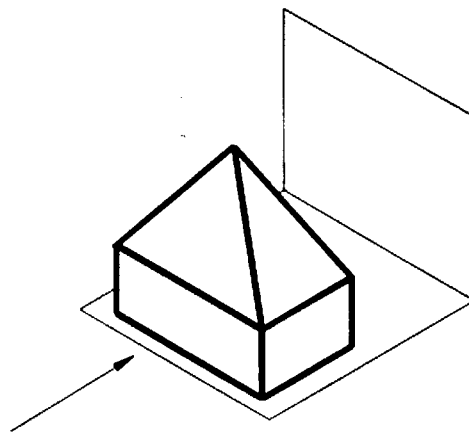
- 10** The elevation and plan of a hexagonal based prism are shown. Project an **auxiliary elevation**, on the given $X_1 - Y_1$ line.



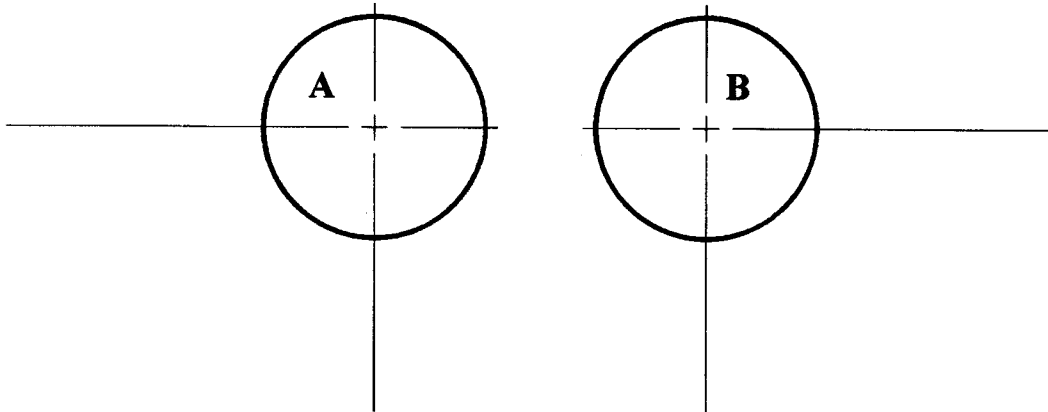
- 11** Using the grid provided, sketch the orthographic views indicated by the arrows.



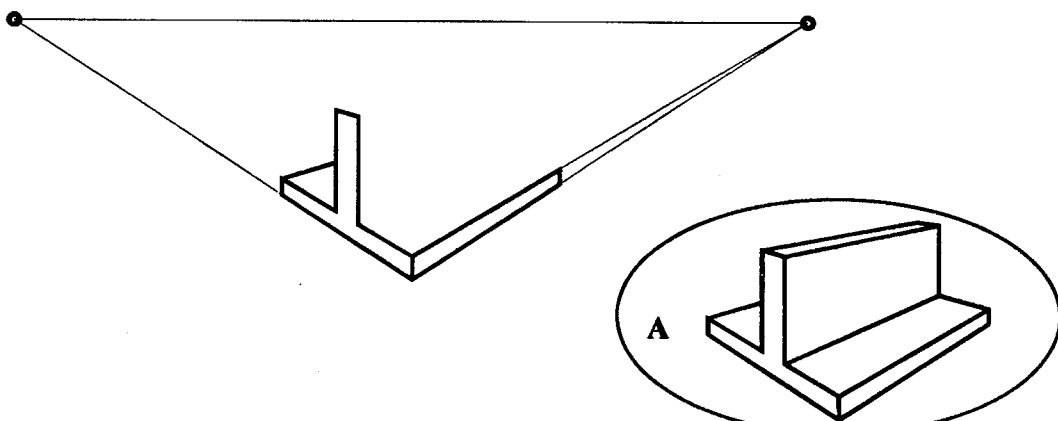
- 12** Sketch the **shadow** cast by the solid when the light source is as indicated by the arrow.



- 13** Construct an arc, of radius 25mm, tangential to circles A and B. Show clearly all constructions and points of contact.



- 14** The figure shows the incomplete two point perspective outline of a bracket. Complete the perspective outline, similar to the view shown at A.



- 15** Rotate the mallet clockwise through 60° , about centre, O.

