Coimisiún na Scrúduithe Stáit
State Examinations Commission

S 60 A

JUNIOR CERTIFICATE EXAMINATION, 2003

A

TECHNICAL GRAPHICS — ORDINARY LEVEL

THURSDAY 12 JUNE-MORNING, 9.30 — 12.00

TOTAL MARKS 400 (Section A and B)

EXAMINATION NUMBER ☞	

CENTRE STAMP ☞	

INSTRUCTIONS

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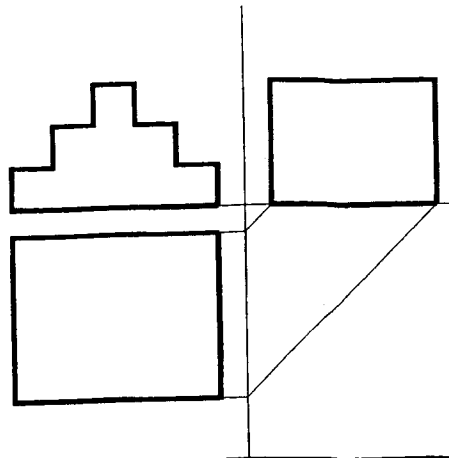
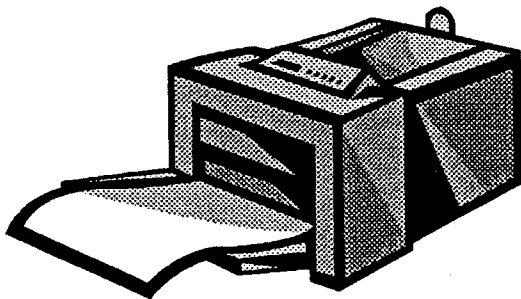| For Examiner's use only	
QUESTION	MARK
Section A (Total)	
Section B Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
TOTAL ☞	
GRADE ☞	

1 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.
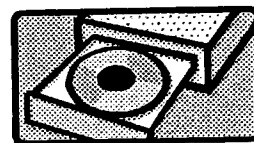
2 Make a freehand pictorial sketch of the block in the space provided.
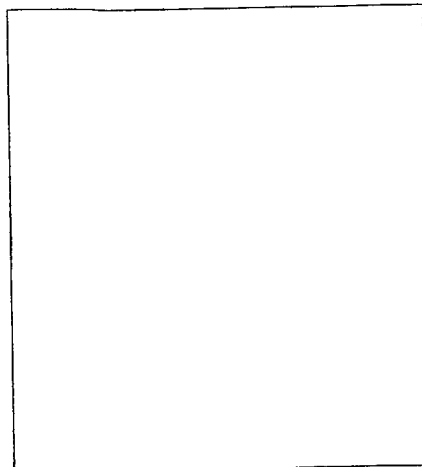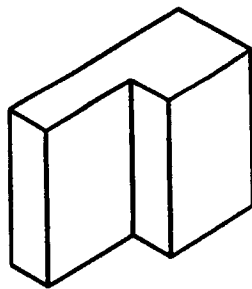
3 Identify the computer components shown at **A** and **B**, below.
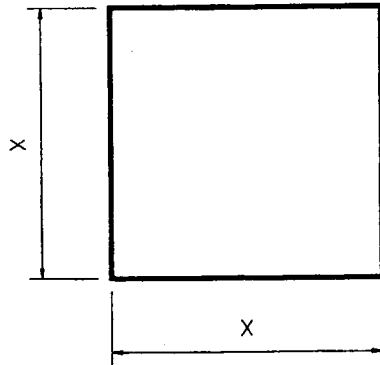
A

B

A = _____

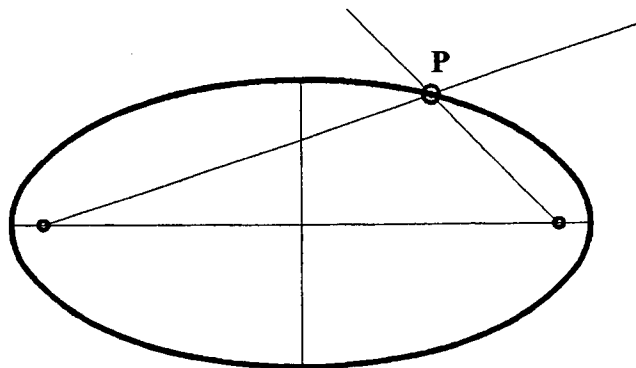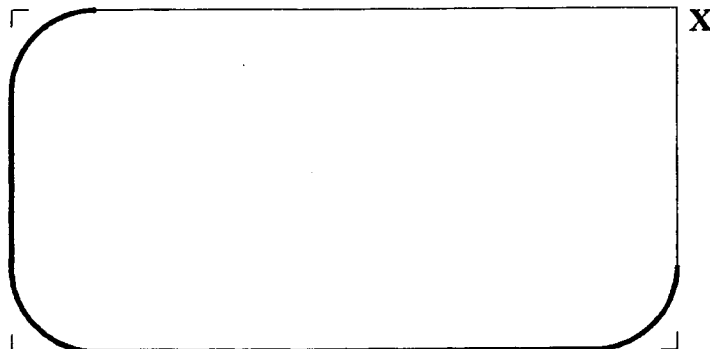B = _____

4   Convert the square to a **triangle** of equal area.

X

X

5   Construct a **tangent** to the ellipse at the point **P.** Show all constructions.
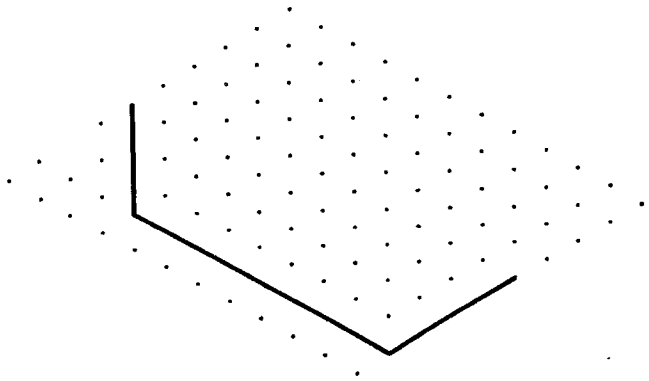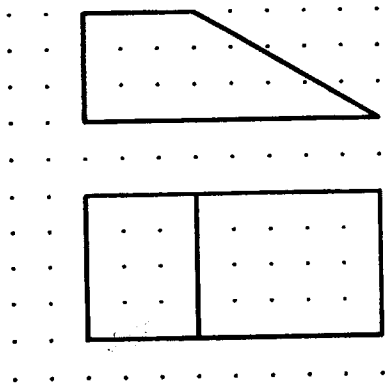
P

6   Three corners of the rectangle are filleted to a radius of 10mm.
Fillet the corner **X** to a radius of 10mm, showing all constructions.
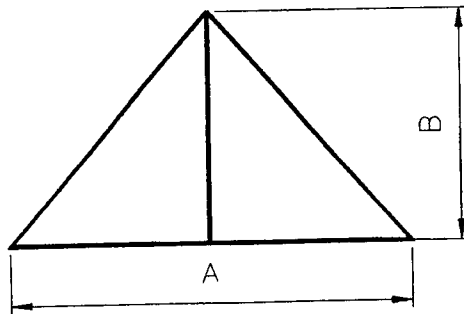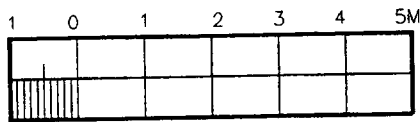
X

7 The elevation and plan of a **door-stopper** are shown.
Complete the isometric view of the door-stopper on the grid provided.

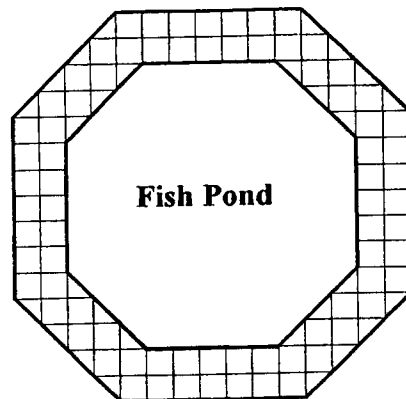**8** Using the scale provided, measure and record the dimensions A and B.
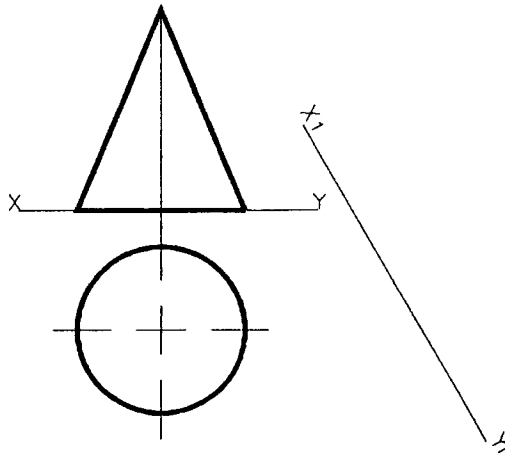
A = _____   B = _____

9 Determine the area of the tiled pathway, which surrounds the fish pond, in square units.
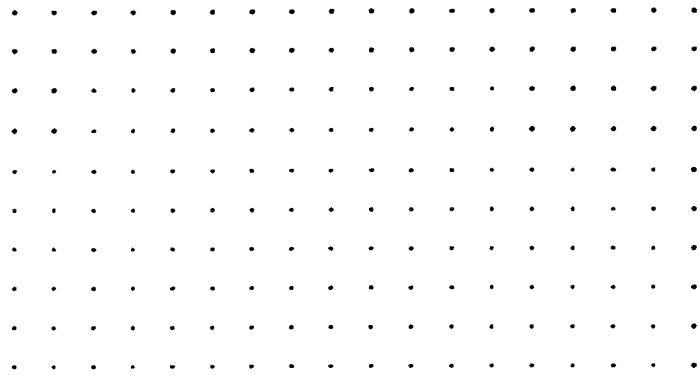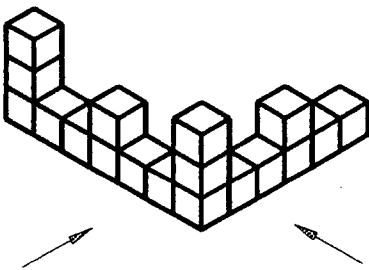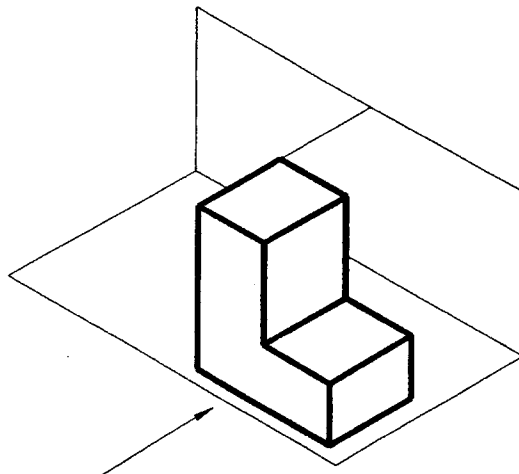
1 square = 1 x 1 Unit.

Answer :- _____

Fish Pond

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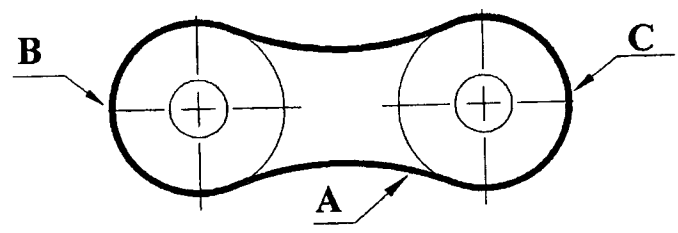Project an **auxiliary elevation**, on the given $X_1 - Y_1$ line.

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 shown by the arrow.
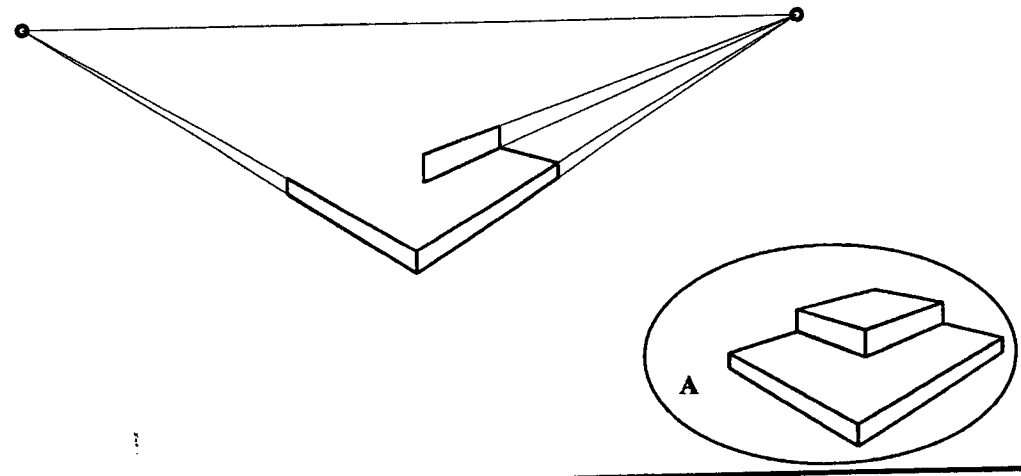
13 A link for a bicycle chain is shown. The centre for arc **A** is shown at **O**.
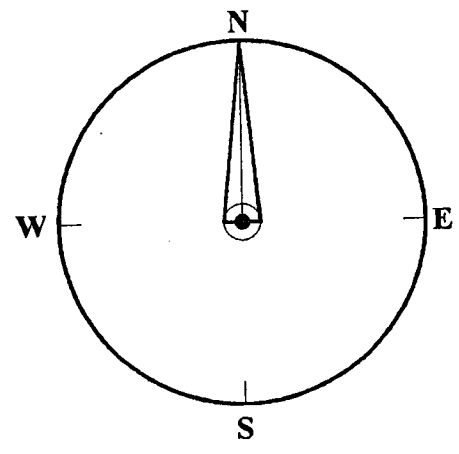**Locate** the points of contact, between arc **A** and circles **B** and **C**.

B

C

A

+O

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

A

15 The figure shows a magnetic compass. Use a protractor to measure and record
the amount of **anti-clockwise rotation** from North to West.

N

W

E

S

Answer:- _____