



Junior Certificate Examination 2005

Technical Graphics
Ordinary Level
Section A (120 Marks)

Monday 20 June

Morning 9:30 - 12:00

Instructions

- (a) Answer any **ten** questions in the spaces provided.
All questions carry equal marks.
- (b) Construction lines must be clearly shown.
- (c) All measurements are in millimetres.
- (d) This booklet must be handed up at the end of the examination.
- (e) Write your examination number in the box provided below
and on all other pages used.

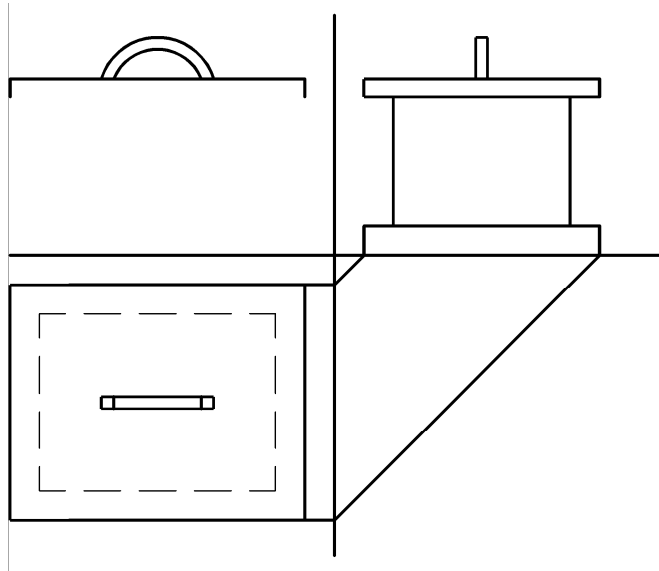
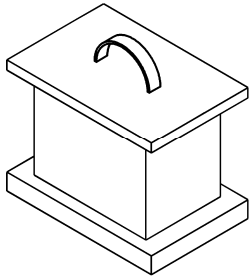
Examination Number:

Centre Number

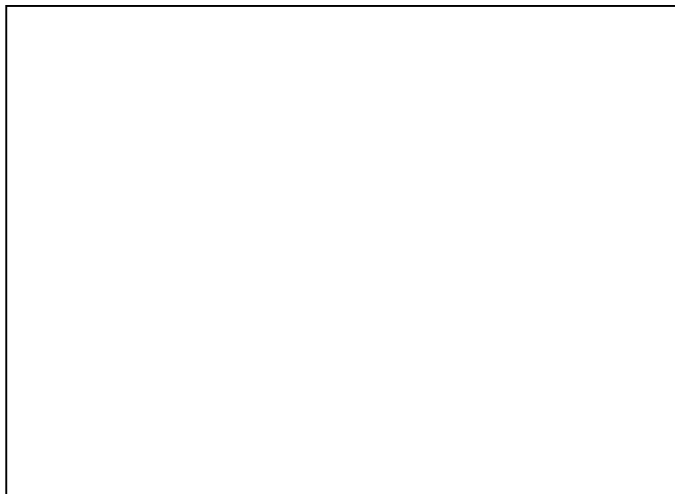
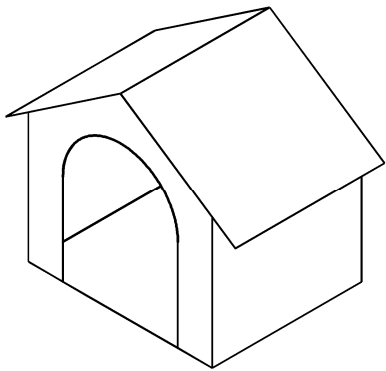
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

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

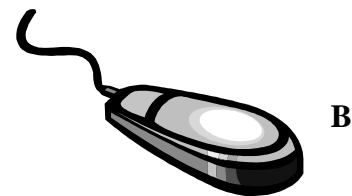
1 Shown is the **incomplete** elevation, plan and end view of a bread bin.
Insert the lines omitted in the elevation.



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



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

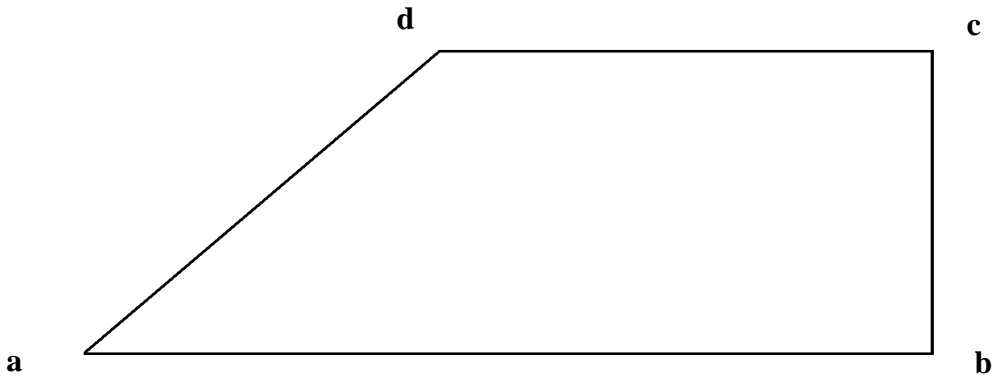


A : _____

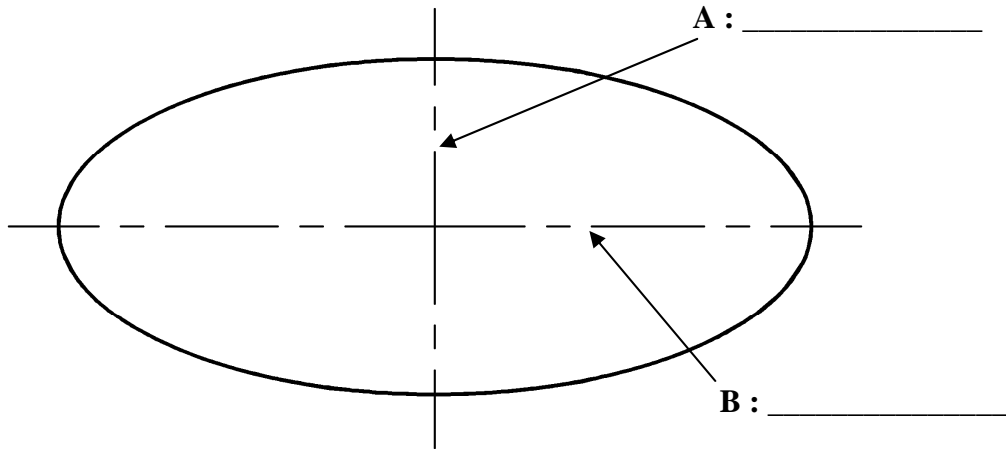
B : _____



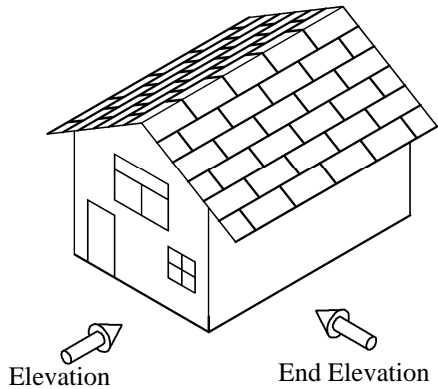
4 Convert the given figure **abcd** to a **rectangle** of equal area.



5 The figure shows an ellipse.
Locate the focal points of the ellipse and **label** the parts A and B.

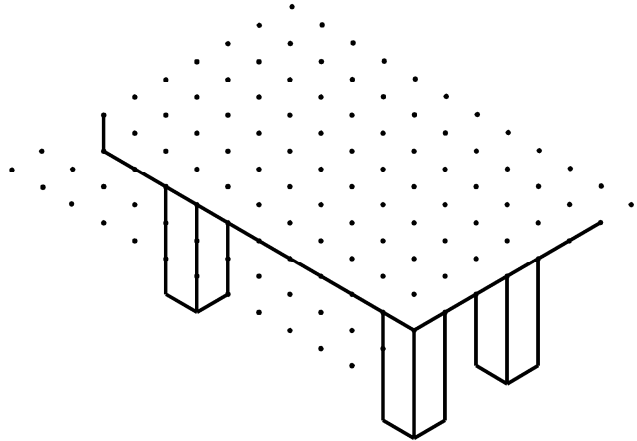
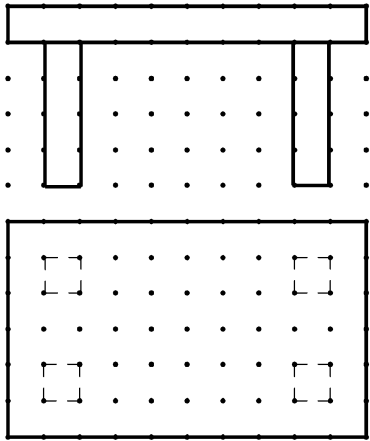


6 Shown is a pictorial drawing of a house.
Make a well proportioned **freehand sketch** of the elevation and end elevation in the space provided. Apply shading **OR** colour to the completed sketch.



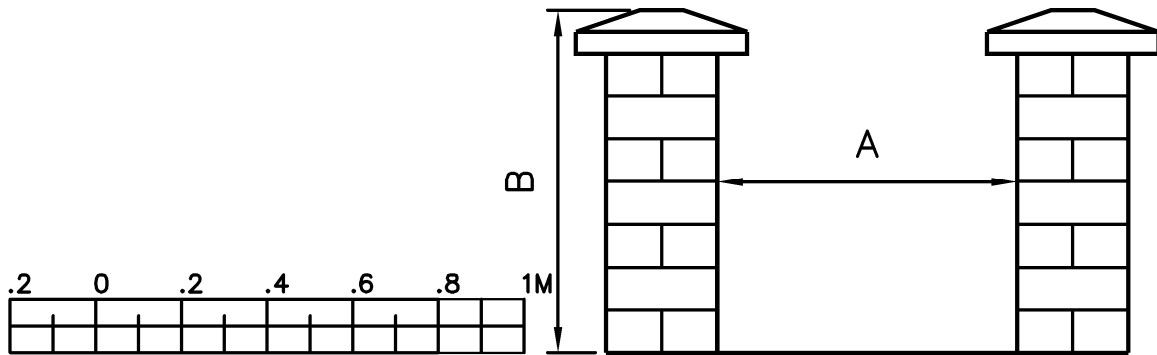
7

The elevation and plan of a table are shown.
Complete the isometric view of the table on the grid provided.



8

Using the scale provided, **measure** and **record** the dimensions A and B, in the gateway shown.

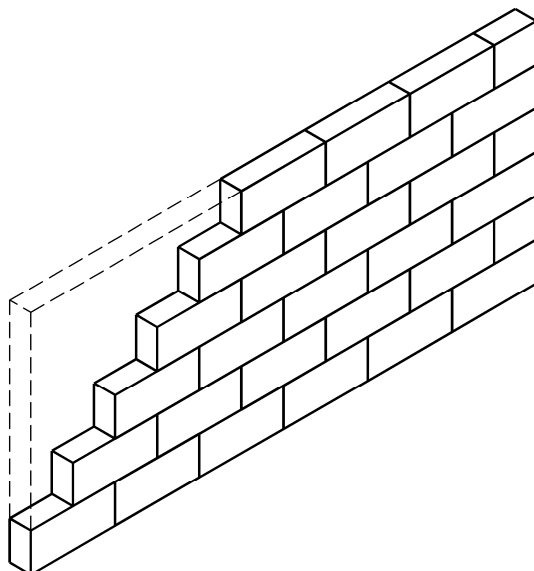


A : _____

B : _____

9

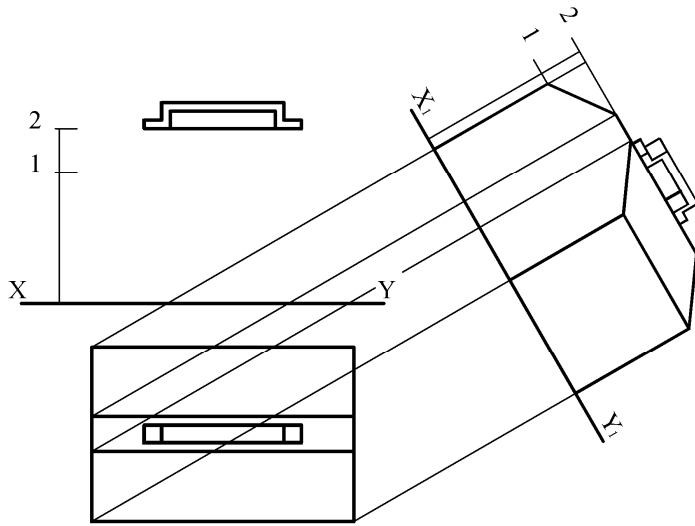
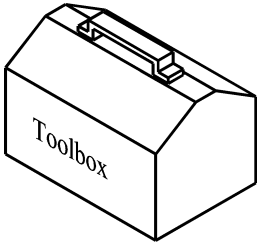
Determine the number of extra blocks required to complete the wall shown in the sketch.



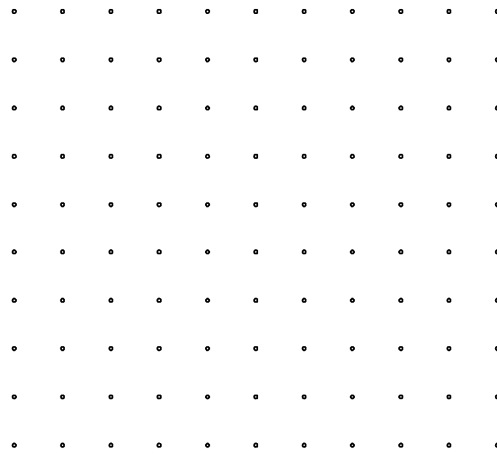
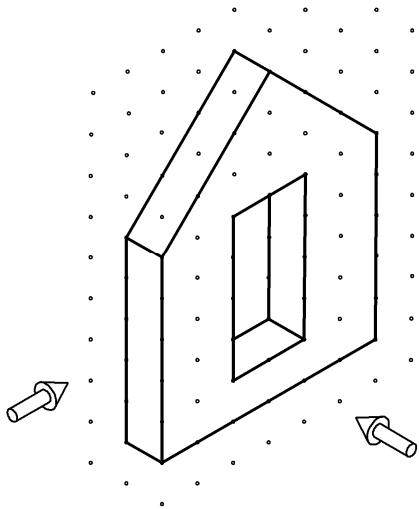
Answer:- _____ blocks.



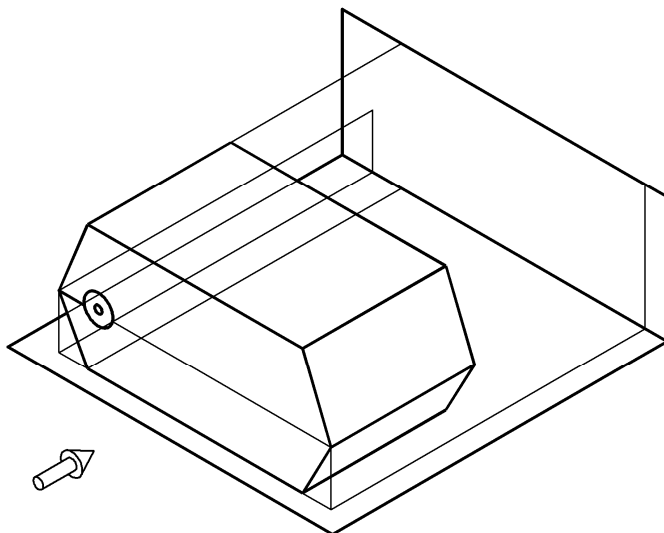
10 Shown is the **incomplete** elevation, plan and auxiliary elevation of a toolbox.
 Also shown is a sketch of the toolbox.
Complete the elevation of the given toolbox.



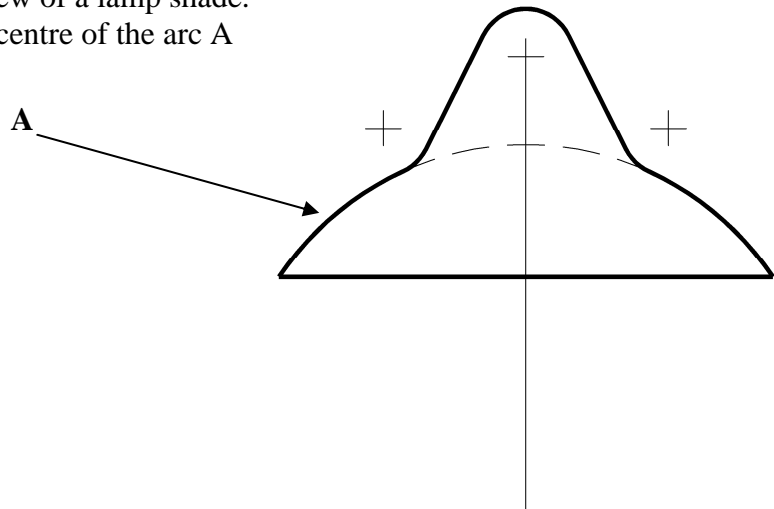
11 Using the grid provided, **sketch** the orthographic views indicated by the arrows.



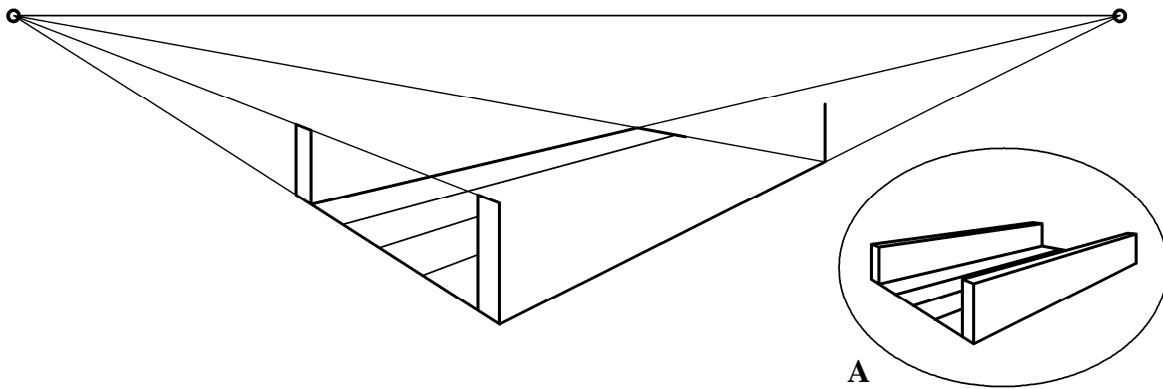
12 Sketch the **shadow** cast by the computer disk storage box, when the light source is from the direction of the arrow.



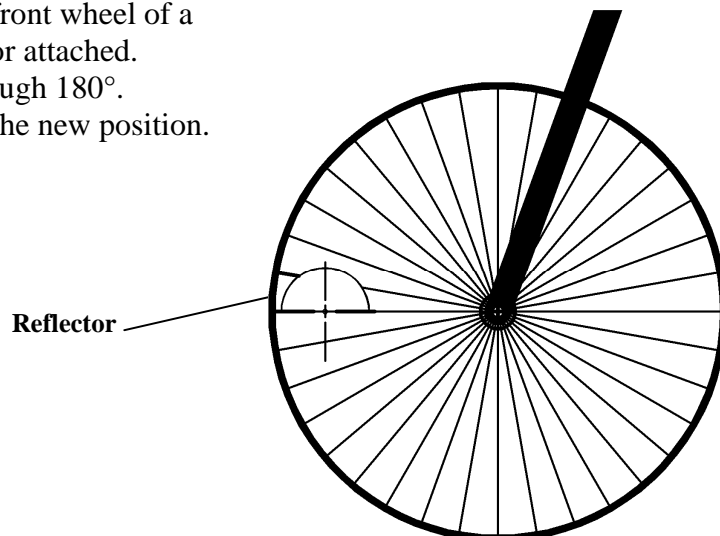
- 13** Shown is an outline view of a lamp shade.
Show clearly how the centre of the arc A is found.



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



- 15** The figure shows the front wheel of a bicycle, with a reflector attached.
The wheel rotates through 180° .
Draw the reflector in the new position.



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Junior Certificate Examination 2005

Technical Graphics
Ordinary Level
Section B (280 Marks)

Monday 20 June

Morning 9:30 - 12:00

Instructions

- (a) Answer any **four** questions. All questions carry equal marks.
- (b) The number of the question must be distinctly marked by the side of each answer.
- (c) Work on **one side** of the answer paper only.
- (d) Write your examination number on each sheet of paper used.

SECTION B (ANSWER ANY FOUR QUESTIONS - ALL QUESTIONS CARRY EQUAL MARKS)

1

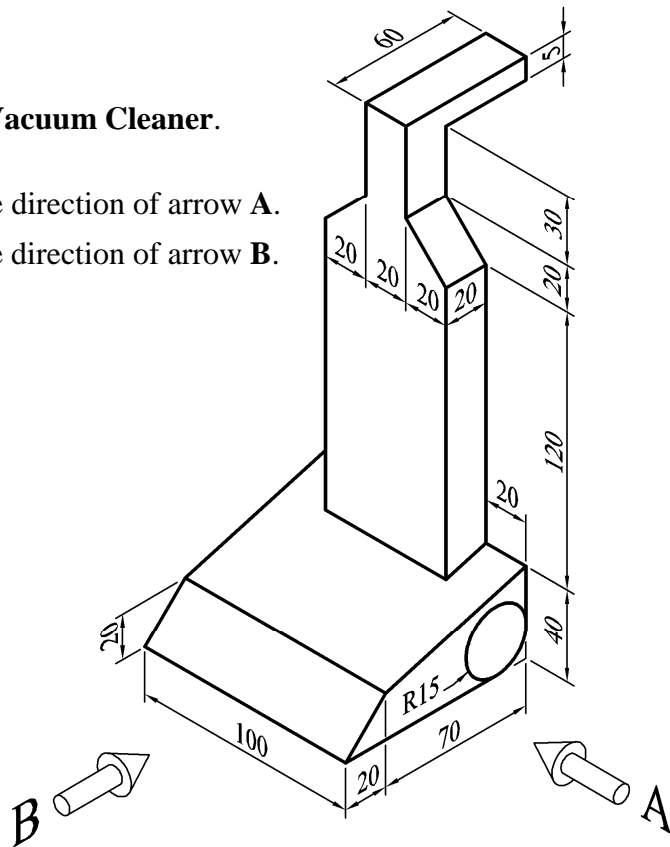
The figure shows the outline of a **Vacuum Cleaner**.

Draw:-

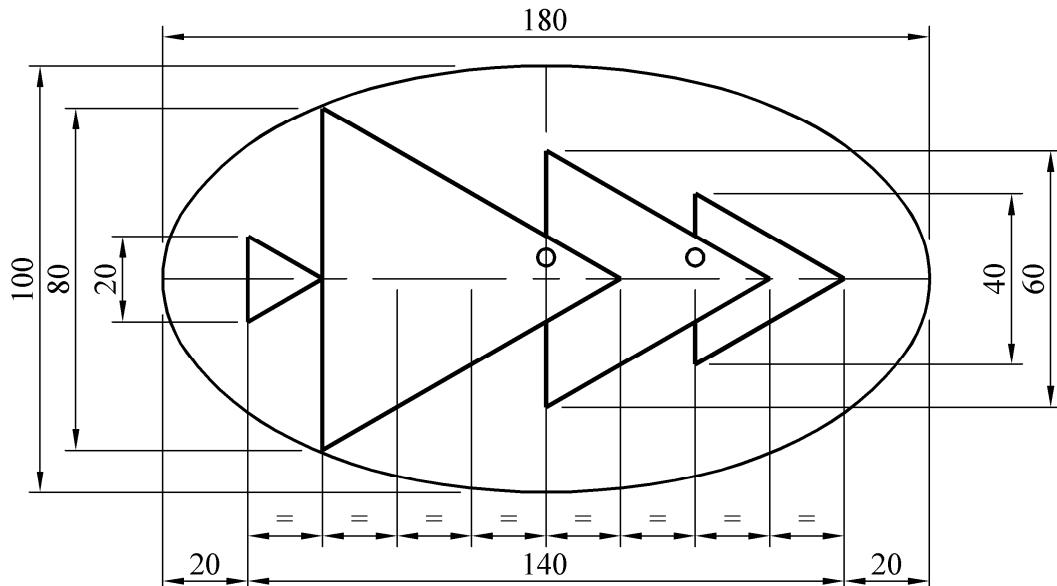
(a) A front elevation looking in the direction of arrow **A**.

(b) An end elevation looking in the direction of arrow **B**.

Insert any **four** dimensions.



2



The figure shows a **LOGO** for a **Fish Farm** in the shape of an ellipse.

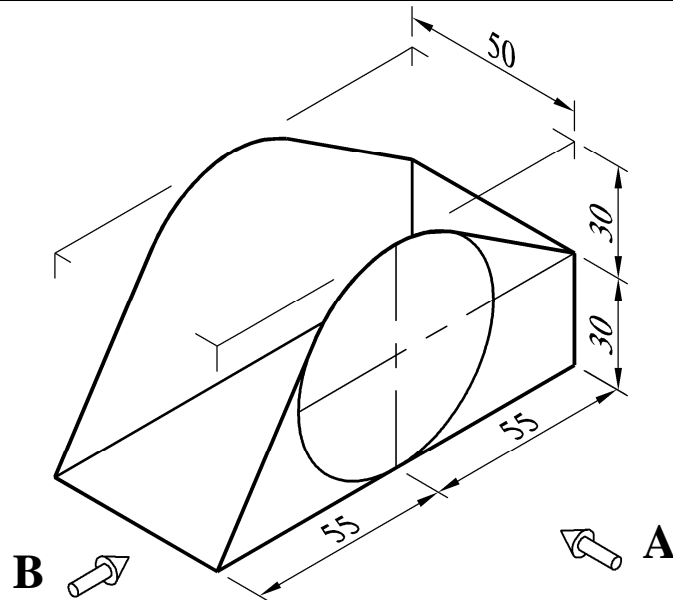
The Major Axis is 180 mm and the Minor Axis 100 mm.

Draw the given design showing clearly all construction lines.

(Insert eyes freehand using your own dimensions)



3

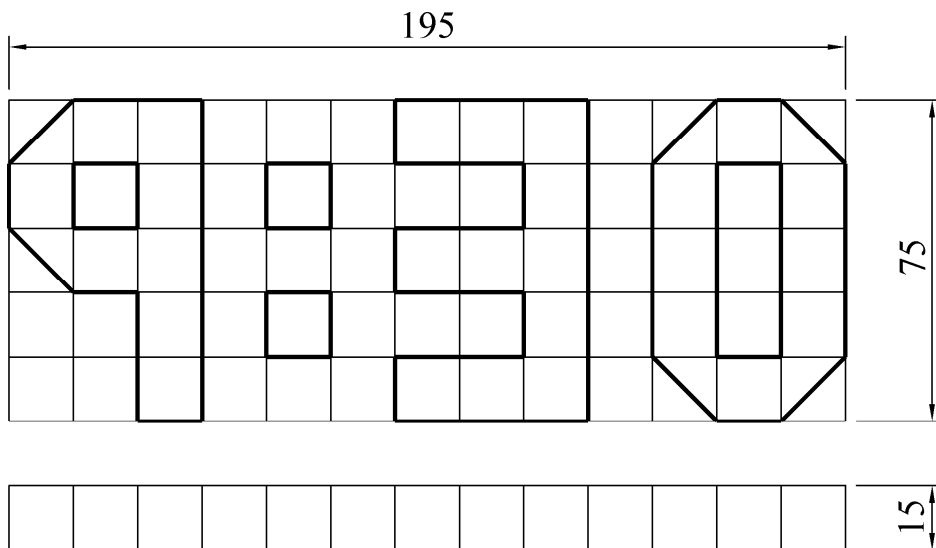


The figure shows the outline of a **bucket** for a mechanical digger.

Draw:

- (a) A front elevation looking in the direction of arrow A.
- (b) An end elevation looking in the direction of arrow B.
- (c) The complete **surface development** of the bucket.

4



The figure shows a **Digital Clock Face**, with a time of 9.30.

The grid is made up of 15mm squares.

Draw **one** of the following views :

- (a) An **isometric** view or (b) An **oblique** view of the clock face.

The solution must be presented on standard drawing paper.



5

Draw the given figure. Locate the points **A**, **A1**, **A2**, **A3** and point **P**.
 Find the image of the given figure under the following transformations :-
 (a) From point **A** to **A1** by a **translation** ,
 (b) From point **A1** to **A2** by an **axial symmetry** in the line **A — A3**,
 (c) From point **A2** to **A3** by a **central symmetry** in the point **P**.

6

A design for an **electric iron** is shown. Reproduce the given figure, showing clearly all constructions and points of contact.