



Junior Certificate Examination 2004

Technical Graphics
Ordinary Level
Section A (120 Marks)

Monday 21 June
Afternoon, 2:00 to 4:30

Centre Number

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.

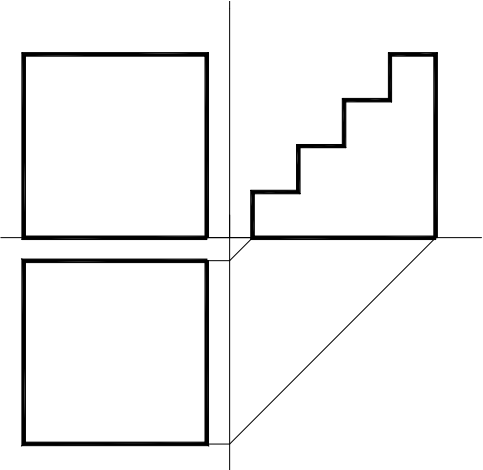
Examination Number:

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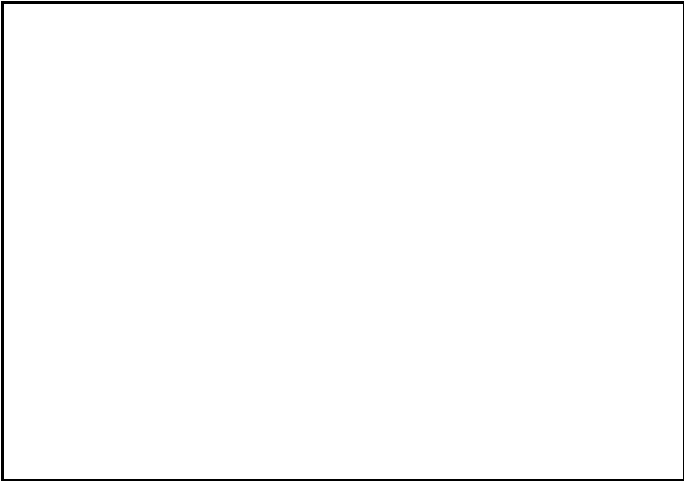
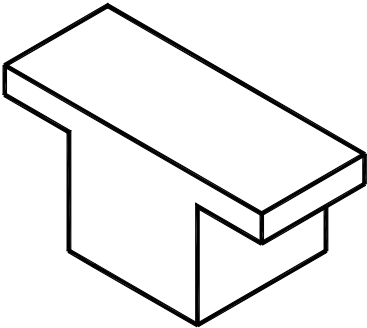
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
Total	
Grade	

SECTION A: ANSWER ANY TEN QUESTIONS

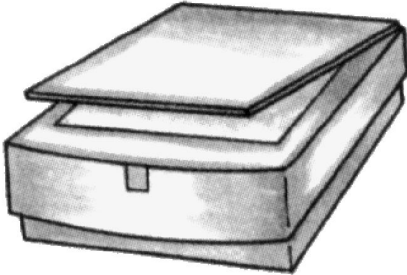
1 Shown is the incomplete elevation, incomplete plan and end view of a set of **steps**. **Insert** the lines omitted in the elevation and in the plan.



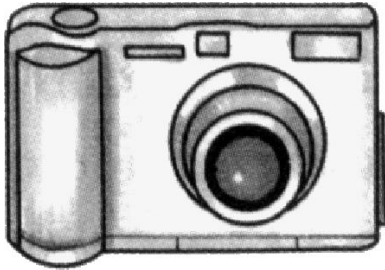
2 Make a freehand pictorial sketch of the picnic table in the space provided. Apply shading to the sketch.



3 Identify the computer related components shown at **A** and **B**



A

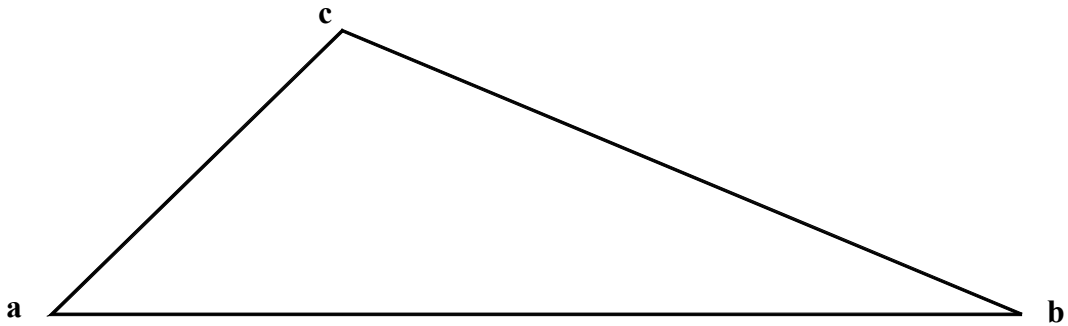


B

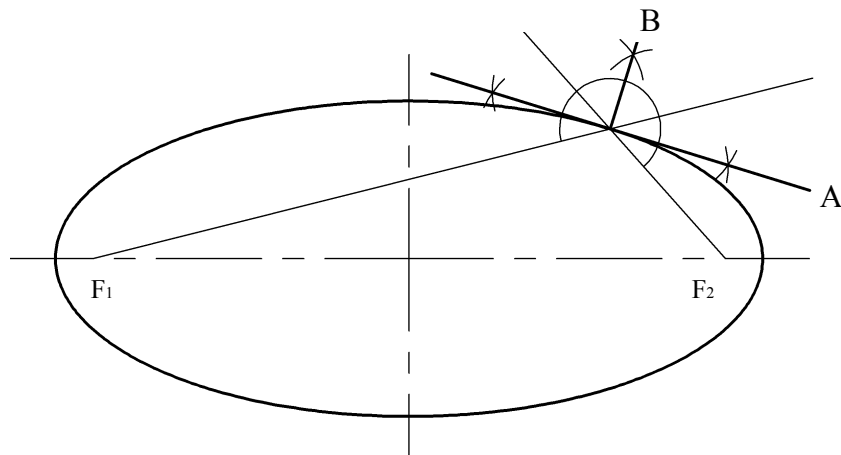
A _____

B _____

- 4 Convert the triangle **abc** to a **rectangle** of equal area.



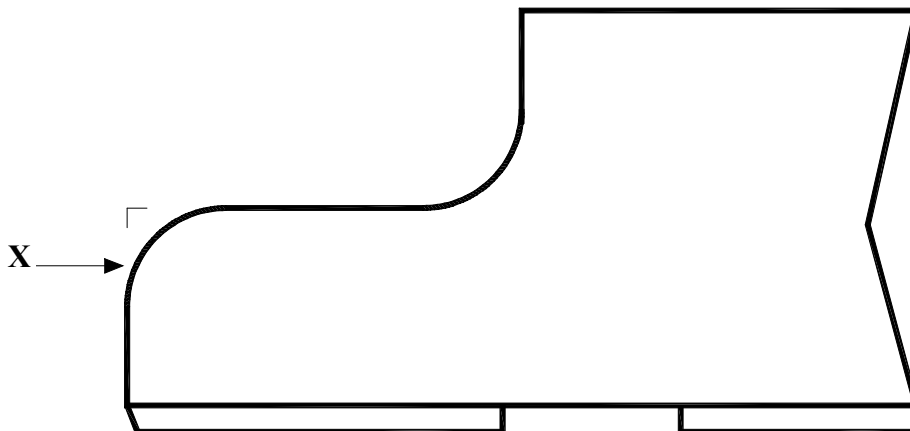
- 5 Shown is an ellipse. Name the lines labelled A and B.



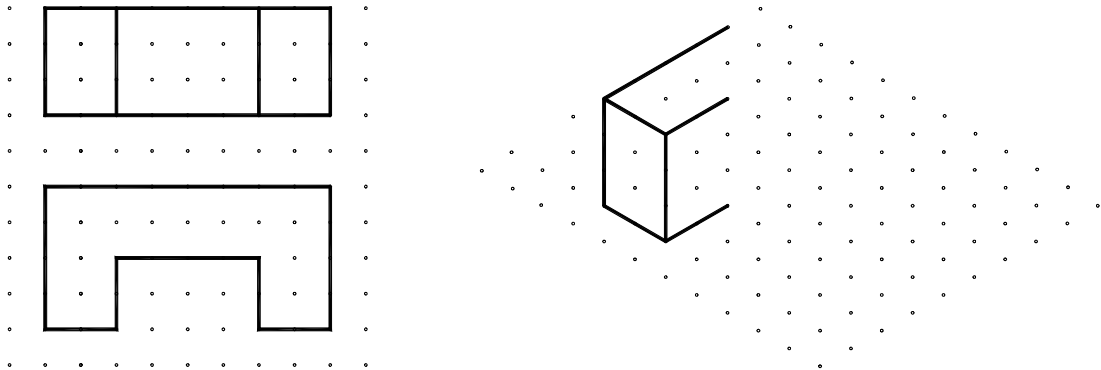
A _____

B _____

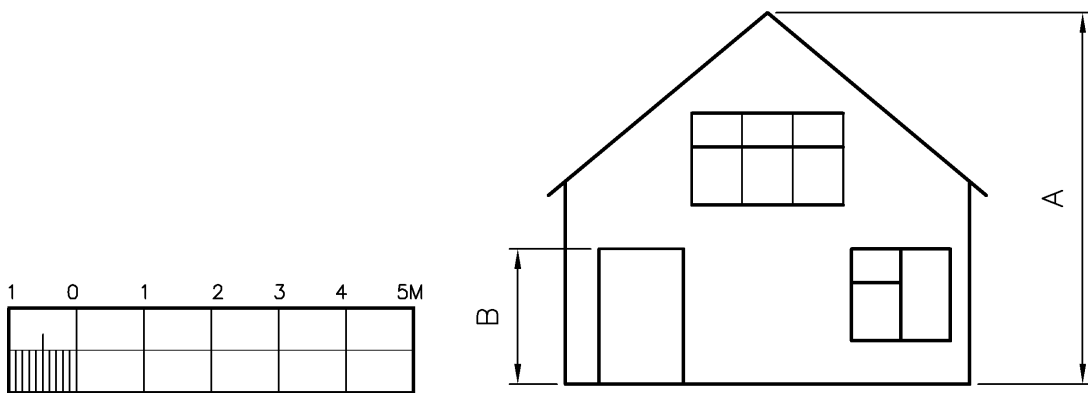
- 6 The figure shows the outline of a boot.
Show clearly how to locate the centre of the arc **X**, which has a radius of 15 mm.



7 The elevation and plan of a **paving block** are shown.
Complete the isometric view of the paving block on the grid provided.



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



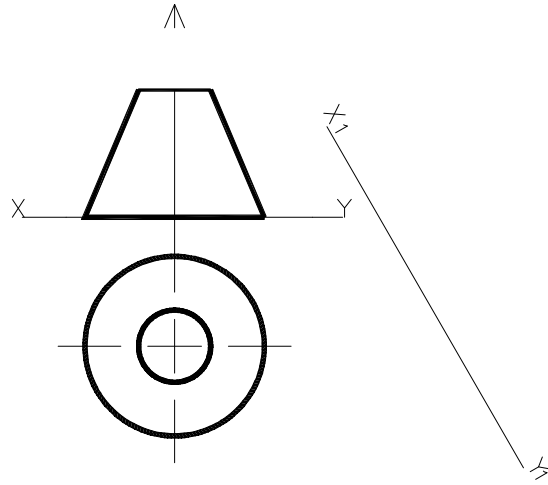
A Metres. B Metres.

9 Determine the number of hexagonal paving slabs which are required to pave the path as shown.

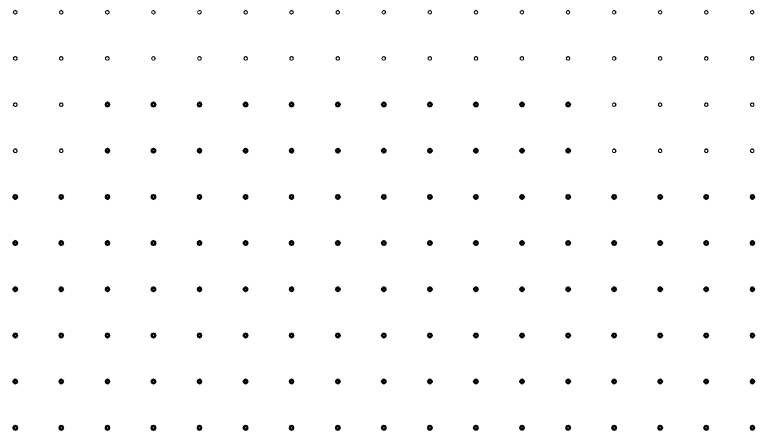
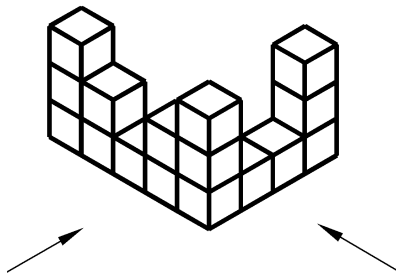


Answer:- _____

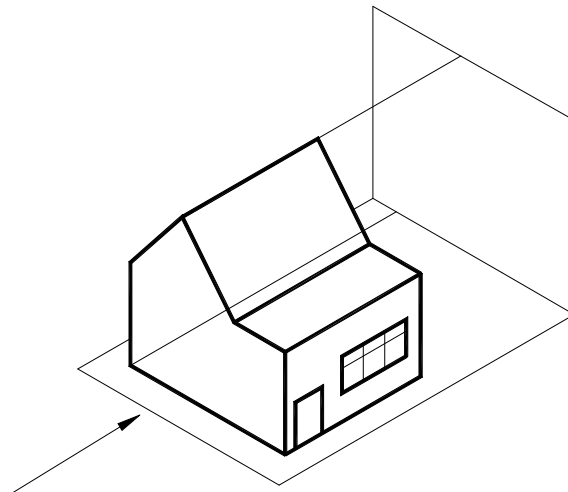
10 The elevation and plan of a lamp shade are shown.
Project an **auxiliary elevation** on the given $X_1 - Y_1$ line.



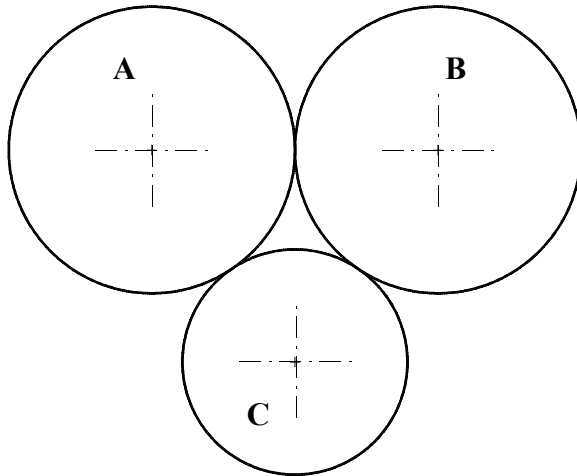
11 Using the grid provided, **sketch** the orthographic views indicated by the arrows.



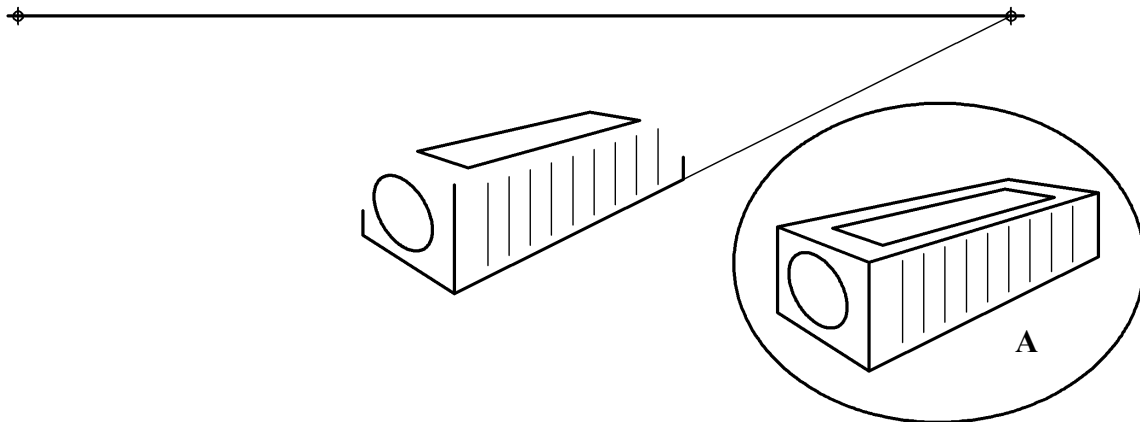
12 Sketch the **shadow** cast by the factory, when the light source is from the direction of the arrow.



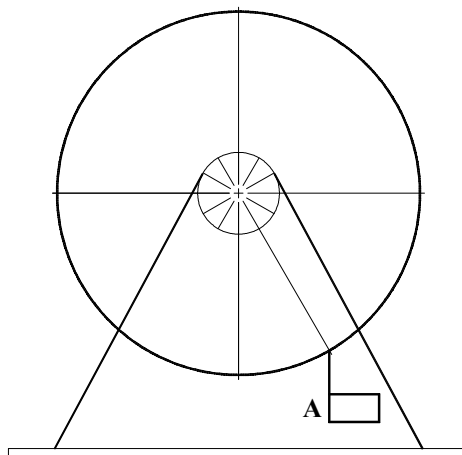
- 13** The diagram shows three coins in contact.
Locate the points of contact between the three coins, **A**, **B** and **C**.



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



- 15** The figure shows a fairground Ferris wheel. The wheel rotates 60° anticlockwise.
Draw the chair **A**, in the new position.



This booklet must be handed up at the end of the examination