



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2016

Technical Graphics

Ordinary Level

Section A

(120 marks)

Monday, 20 June

Morning 9:30 - 12:00

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| Centre Number |
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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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| Centre Number |
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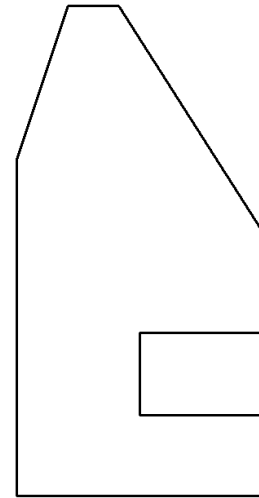
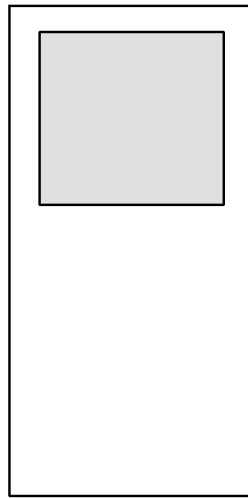
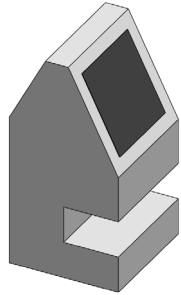
| Question | Mark |
|--------------|------|
| Section A | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| TOTAL | |
| GRADE | |

SECTION A. Answer **any ten** questions. All questions carry equal marks.

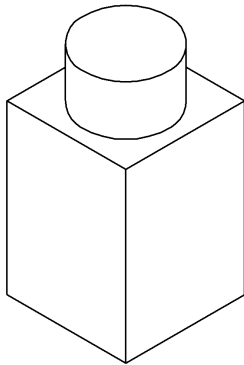
1. Shown is the **incomplete** elevation and end view of a lottery ticket scanner.

Also shown is a 3D graphic of the scanner.

Insert the missing lines in the elevation.



2. In the space provided, make a **freehand pictorial sketch** of the makeup bottle shown. Colour **or** shade the completed sketch.



3. Name the computer related item shown **and** state its use.

Name:

Use:



4. Fig. 1 shows a jewellery store logo inscribed in the square ABCD. Draw the enlarged logo in the given square ABCD in Fig. 2.

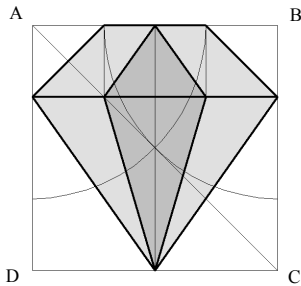


Fig. 1

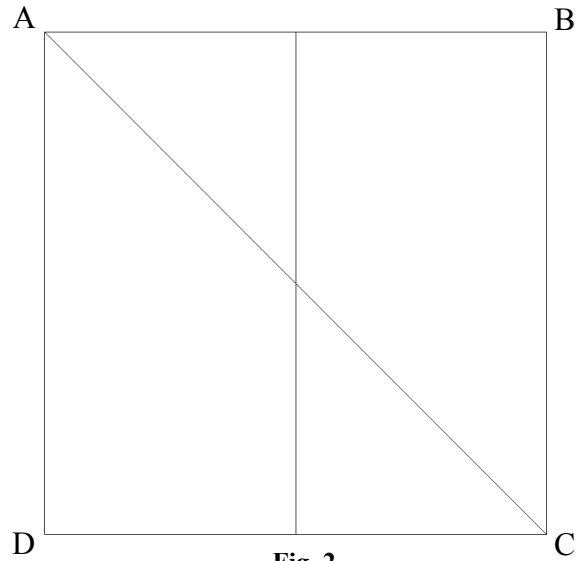


Fig. 2

5. Fig. 1 shows a logo for a sailing company.

The line PQ is a tangent to the ellipse at P. Locate the focal points of the ellipse in Fig. 2 and complete the sail by drawing the tangent PQ.

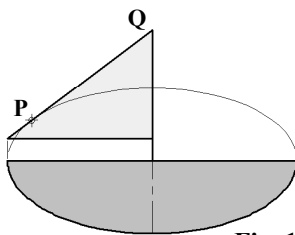


Fig. 1

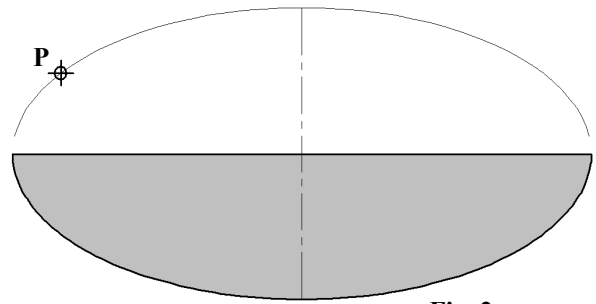
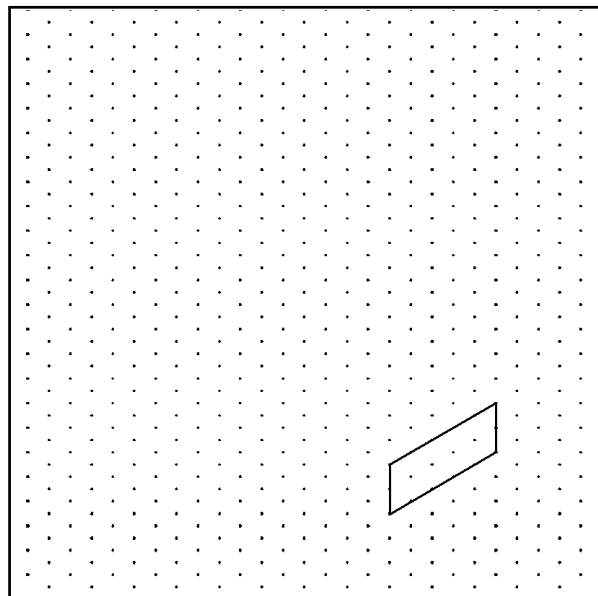
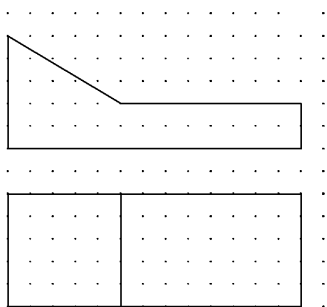
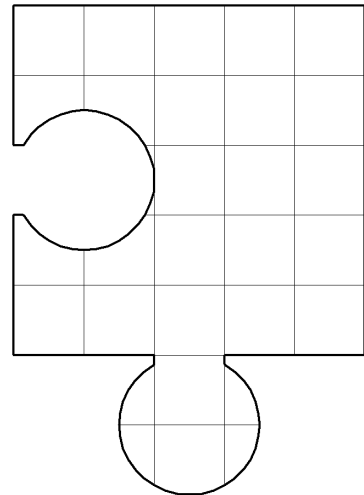
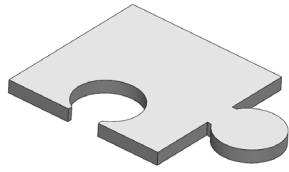


Fig. 2

6. The elevation and plan of a sun lounger are shown. Make a well proportioned **freehand sketch** of the lounger in the space provided. Colour or shade the completed sketch.



7. The outline of a jigsaw piece is shown.
Also shown is a 3D graphic of the jigsaw piece.



Write down the area of the jigsaw piece in square units.

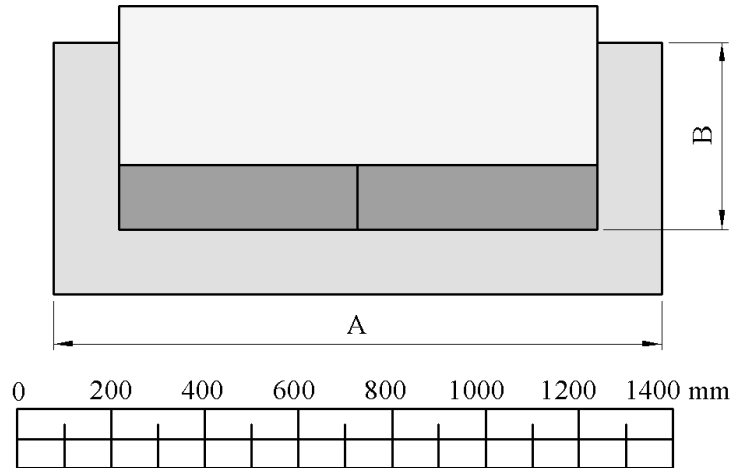
1 square = 1 square unit.

Area of the jigsaw piece: _____ square units.

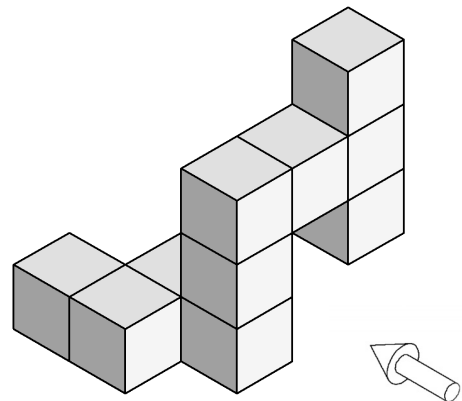
8. Using the scale provided,
measure and **write down**
the dimensions **A** and **B**
for the couch shown.

A: _____

B: _____

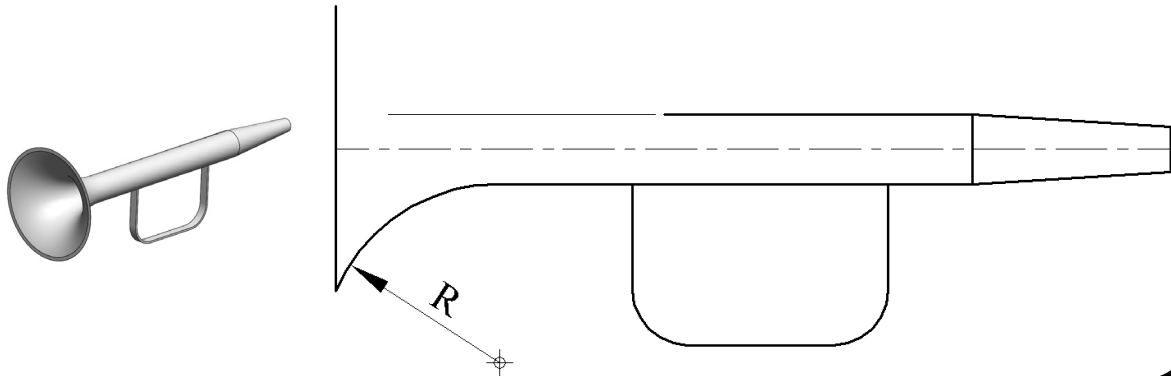


9. The figure shows a set of blocks.
Draw, in the space provided, an elevation of the blocks in the direction of the arrow.

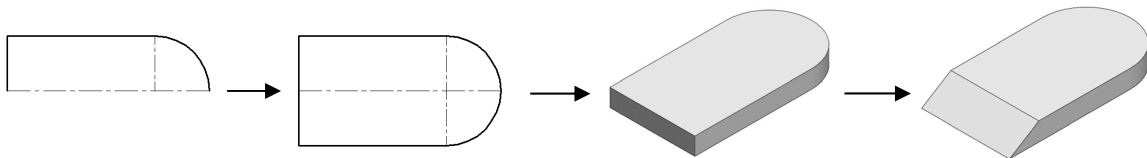


10. The figure shows the incomplete outline of a toy trumpet. Also shown is a 3D model of the trumpet.

Complete the drawing of the trumpet showing all constructions and points of contact.



11. Write down **any two** CAD commands used to produce the drawing of the eraser.

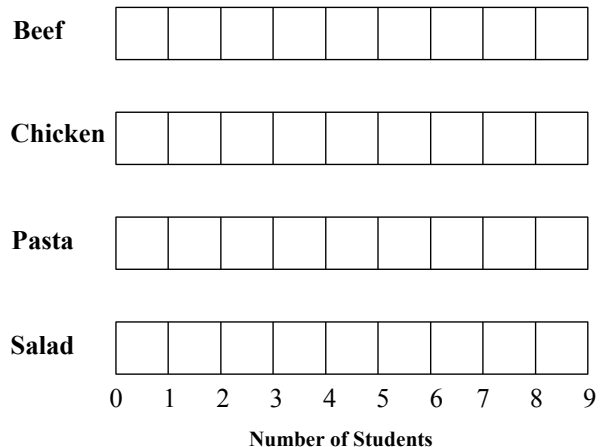


Any **two** CAD commands: _____

12. Twenty four students were surveyed regarding their choice of lunch from the school canteen.

Shade the horizontal bar chart to indicate the following student choices.

- Beef - 4 students
- Chicken - 8 students
- Pasta - 5 students
- Salad - 7 students



- 13.** Fig. 1 shows the plan of a trampoline. The outline is based on a regular octagon.

Fig. 2 shows an **incomplete** plan view of a similar trampoline. Complete the plan by drawing the octagon. Show all constructions.

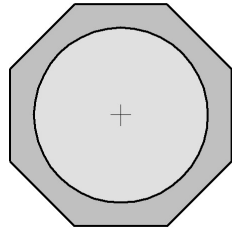


Fig. 1

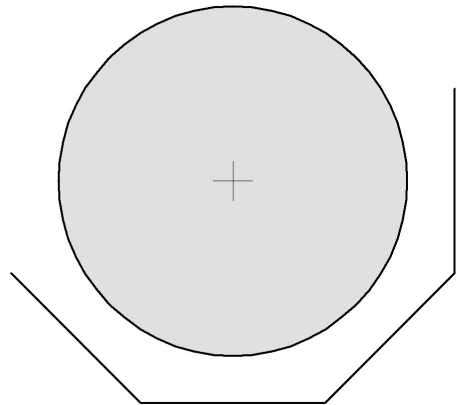
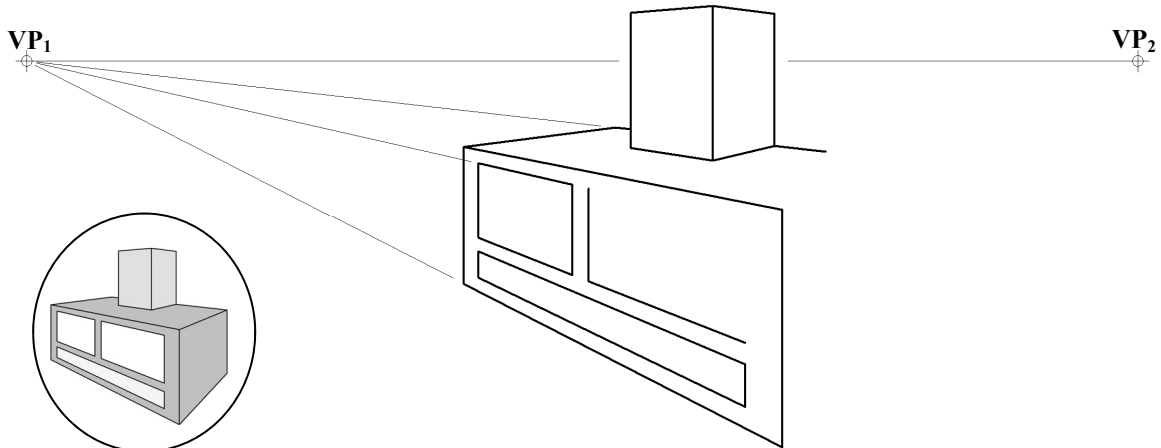


Fig. 2

- 14.** The figure shows an **incomplete** two-point perspective drawing of a stove. A small 3D graphic of the stove is also shown. Complete the perspective drawing of the stove.



- 15.** Fig. 1 shows the design for a railway logo.

Complete the design of the logo in Fig. 2 by constructing an axial symmetry in the line LL_1 .

Colour **or** shade the completed logo.

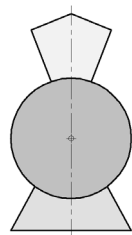


Fig. 1

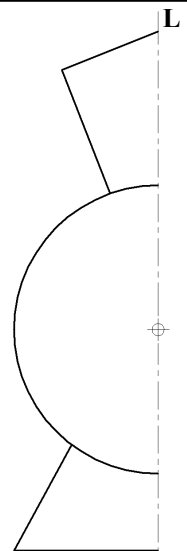


Fig. 2

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