



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2015

Technical Graphics

Ordinary Level

Section A

(120 marks)

Monday, 15 June

Morning, 9:30 - 12:00

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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Centre Number

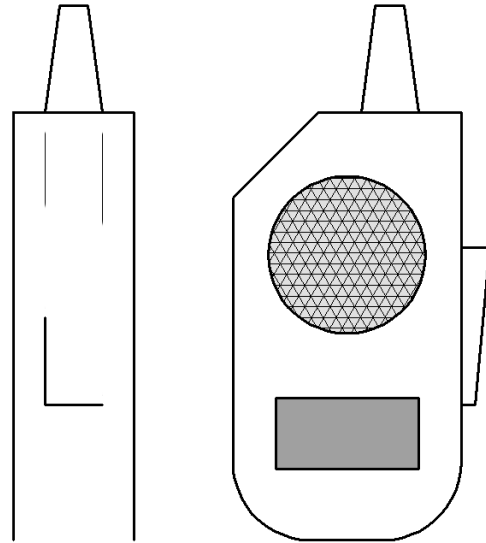
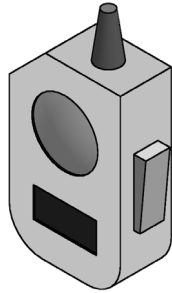
Question	Mark
Section A	
1	
2	
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4	
5	
6	
TOTAL	
GRADE	

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

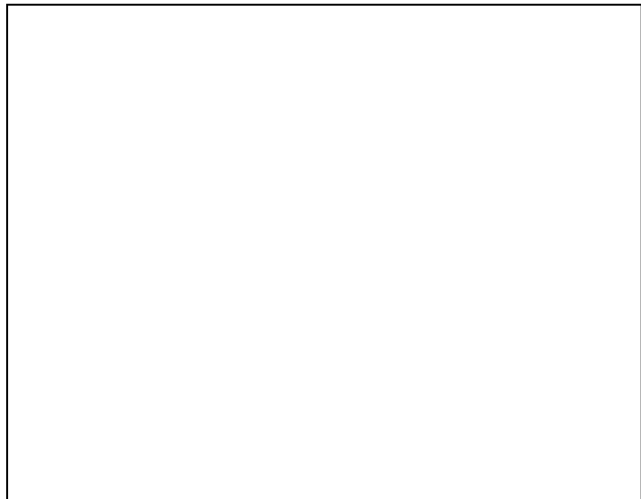
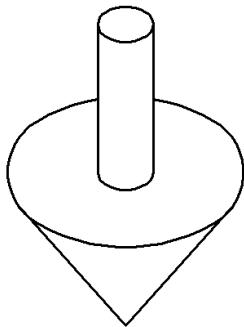
- 1.** Shown is the elevation and **incomplete** end view of a walkie-talkie.

Also shown is a 3D graphic of the walkie-talkie.

Insert the missing lines in the end view.



- 2.** In the space provided, make a **freehand pictorial sketch** of the spinning-top shown. Colour **or** shade the completed sketch.



- 3.** Name the device shown and state its use.

Name:

Use:



4. Fig. 1 shows a school crest inscribed in the square ABCD.

Draw the enlarged crest in the given square ABCD in Fig. 2.

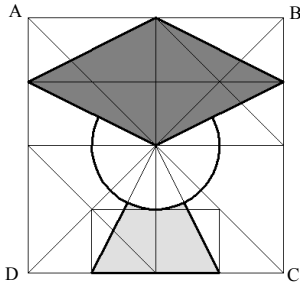


Fig. 1

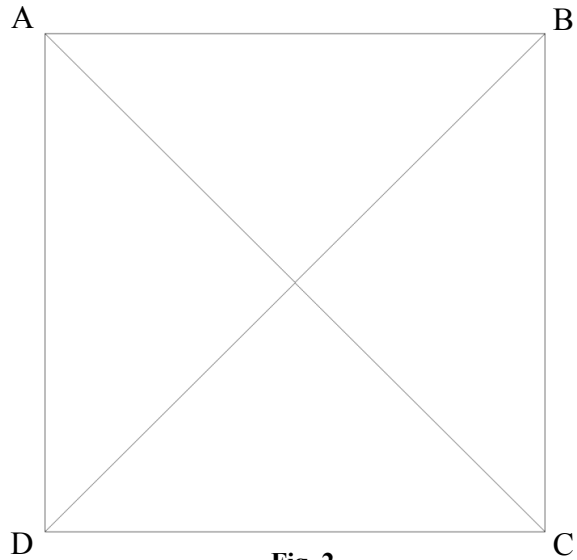


Fig. 2

5. Fig. 1 shows the outline of a USB key based on an ellipse and a rectangle. F_1 and F_2 are the focal points of the ellipse. Locate the focal points in Fig. 2 and complete the design by drawing the rectangle ABCD through F_2 , as shown.

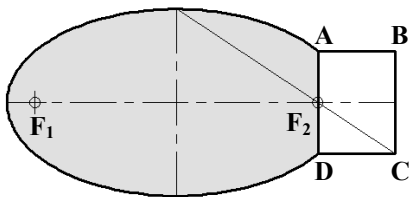


Fig. 1

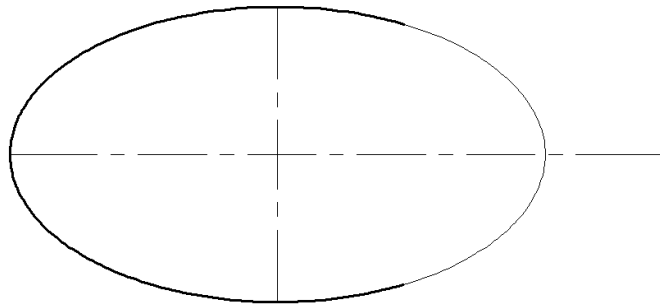
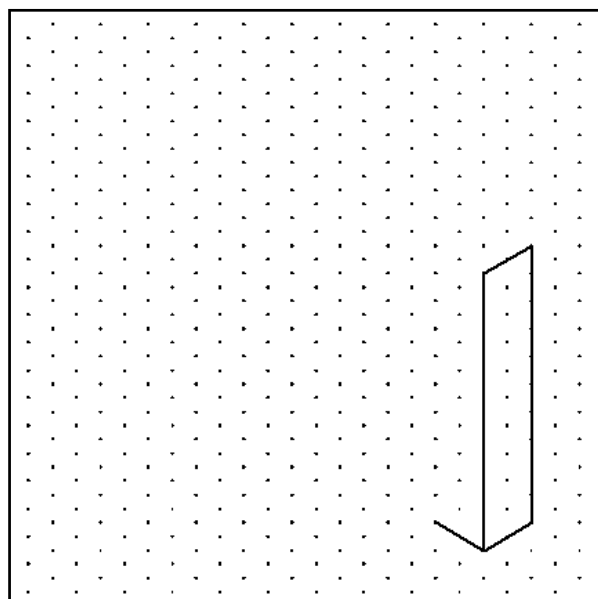
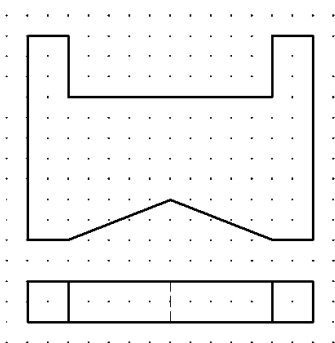


Fig. 2

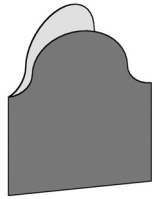
6. The elevation and plan of a show-jumping wall are shown.

Make a well proportioned **freehand sketch** of the wall in the space provided.

Colour **or** shade the completed sketch.



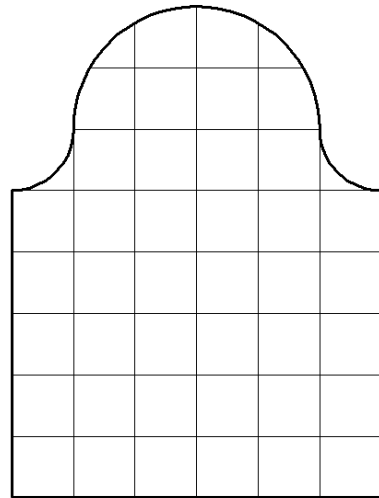
7. The outline of a birthday card is shown. Also shown is a 3D graphic of the card.



Write down the area of the birthday card in square units.

1 square = 1 square unit.

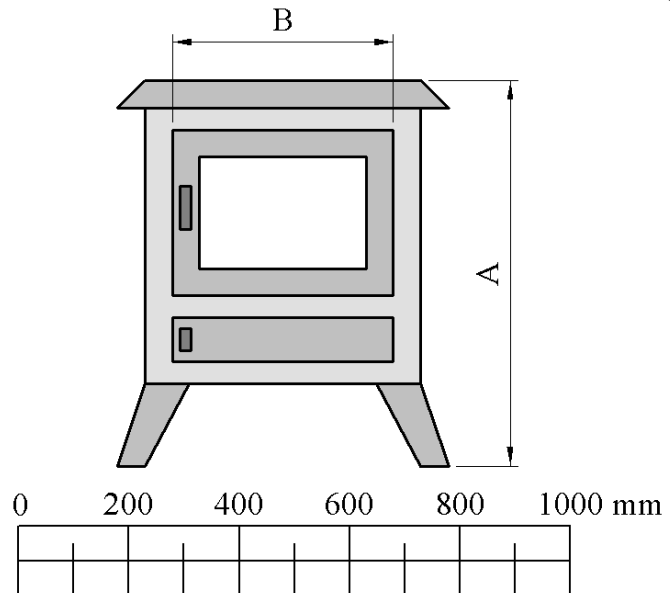
Area of the card: _____ square units.



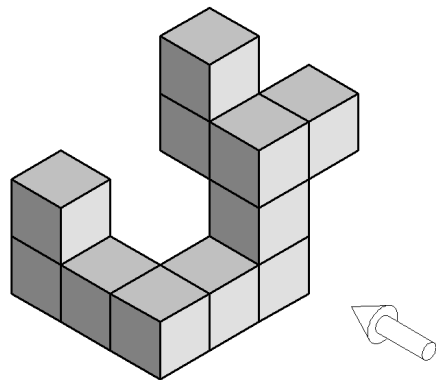
8. Using the scale provided, **measure** and **write down** the dimensions **A** and **B** for the wood burning stove shown.

A: _____

B: _____



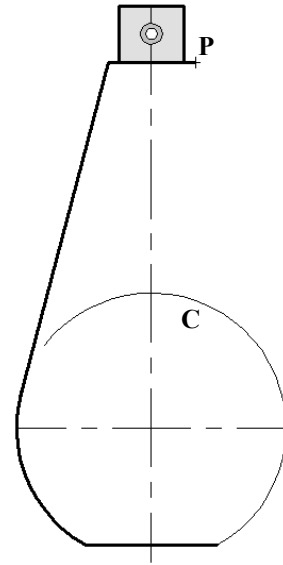
9. The figure shows a set of blocks. Draw, in the space provided, an elevation of the blocks in the direction of the arrow.



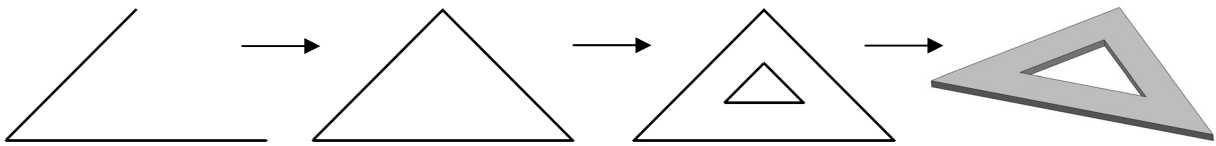
- 10.** The figure shows the incomplete outline of a perfume bottle. Also shown is a 3D graphic of the bottle.

Complete the drawing of the bottle by constructing a tangent from point **P** to the circle **C**.

Show all construction and the point of contact.



- 11.** Write down **any two** CAD commands used to produce the drawing of the set-square.



Any **two** CAD commands: _____

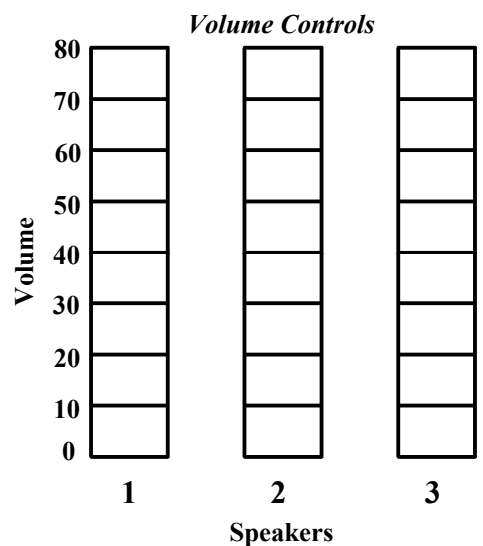
- 12.** A public address system has three speakers. The figure shows the volume control for each speaker.

Shade the volume controls to indicate the following speaker settings:

Speaker 1: 70

Speaker 2: 30

Speaker 3: 50



- 13.** Fig. 1 shows the design for a direction sign. The sign is constructed using 25° angles.

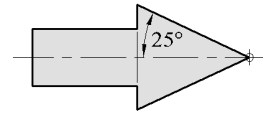


Fig. 1

- Fig. 2 shows an **incomplete** view of the sign. Complete the sign by drawing 25° angles at point P.

Colour **or** shade the completed sign.

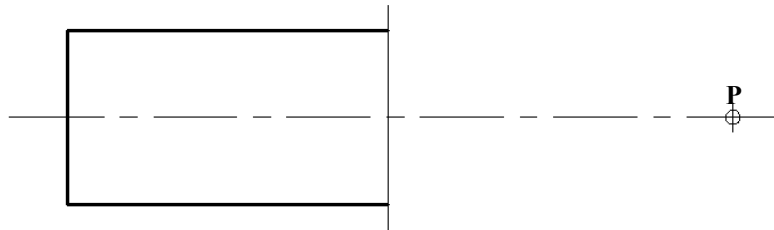
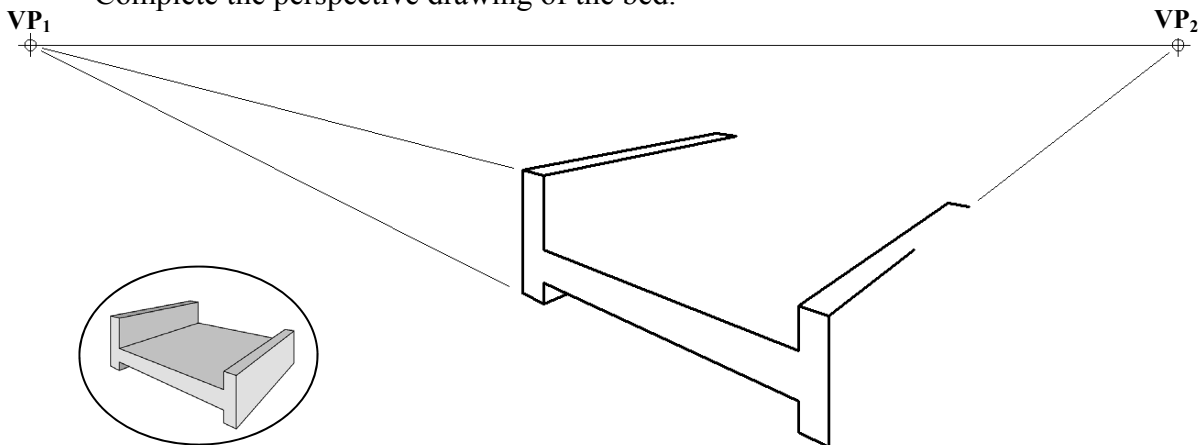


Fig. 2

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



- 15.** Fig. 1 shows the design for a table lamp.

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

Colour **or** shade the completed lamp.

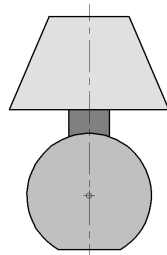


Fig. 1

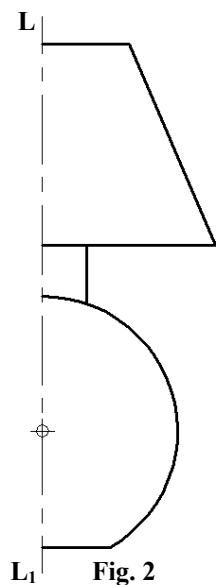


Fig. 2

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