Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2017

Technical Graphics
Ordinary Level
Section A

(120 marks)

Monday, 19 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.*

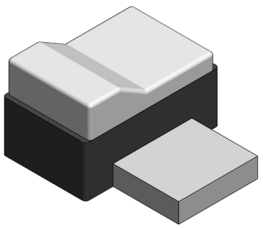
(e) *Write your examination number in the box provided below and on all other pages used.*

Examination Number:

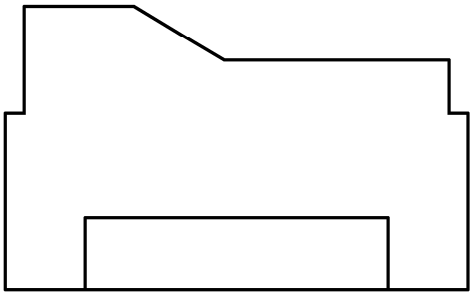
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

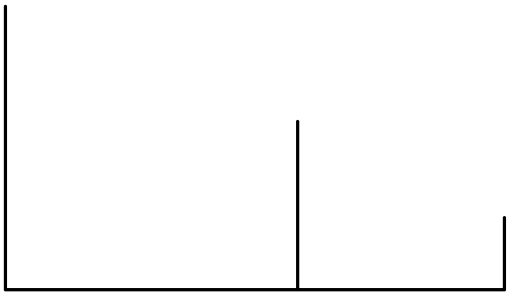
SECTION A. Answer **any ten** questions. All questions carry equal marks.

1. Shown is the elevation and **incomplete** end view of a computer printer. Also shown is a 3D graphic of the printer.



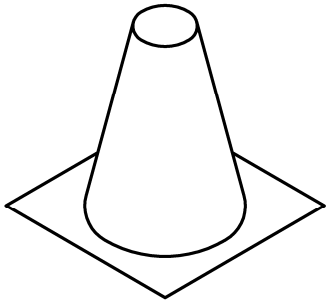
Insert the missing lines in the end view.





2. In the space provided, make a **freehand pictorial sketch** of the sports cone shown below.

Colour **or** shade the completed sketch.



3. Name the computer related items **A** and **B** shown below.

A_____ **B**_____

Give **one** advantage of item **A** over item **B**.

_____

_____

4. **Fig. 1** shows a logo for a car clamping company inscribed in the square **ABCD**.

Draw the enlarged logo in the given square **ABCD** in **Fig. 2**.

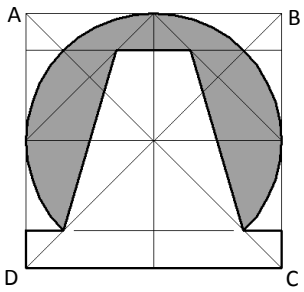


Fig. 1

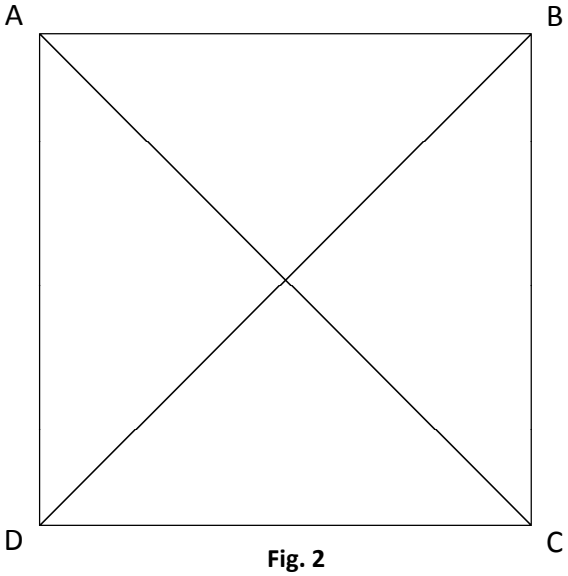


Fig. 2

5. **Fig. 1** shows the outline of a chef's hat based on an ellipse and a rectangle.

$\mathbf{F_1}$ and $\mathbf{F_2}$ are the focal points of the ellipse. Locate the focal points in **Fig. 2** and complete the outline by drawing the rectangle **ABCD** as shown.

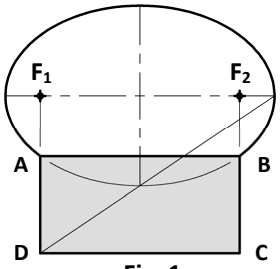


Fig. 1

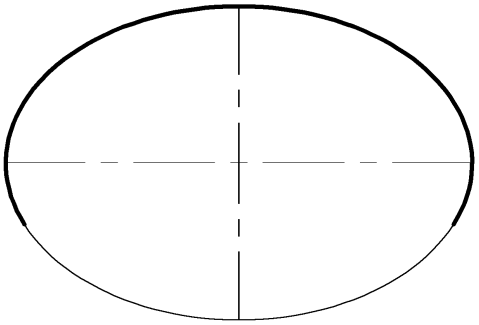
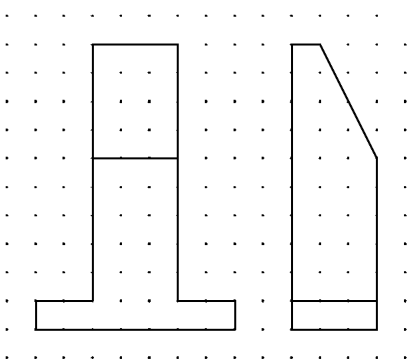


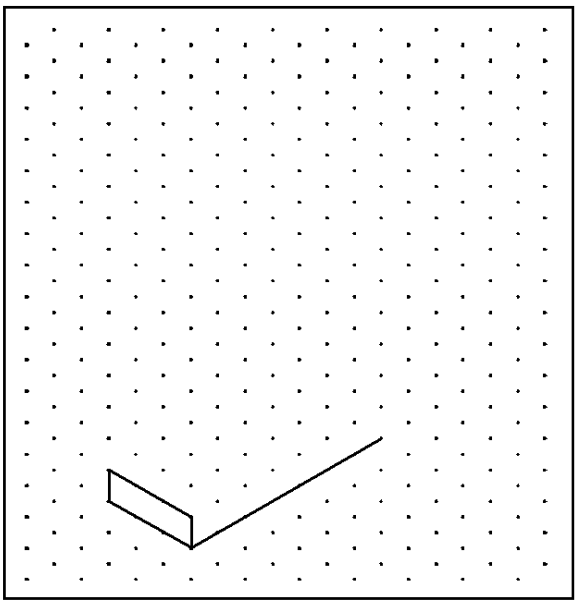
Fig. 2

6. The elevation and end view of an electric car charging point are shown.

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

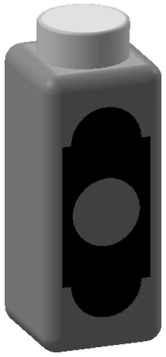
Colour **or** shade the completed sketch.

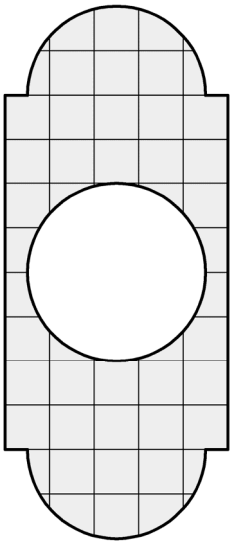




7. The outline of a label for a bottle is shown.
Also shown is a 3D graphic of the label on the bottle.

Write down the area of the label in square units.





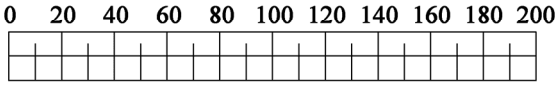
1 square = 1 square unit.

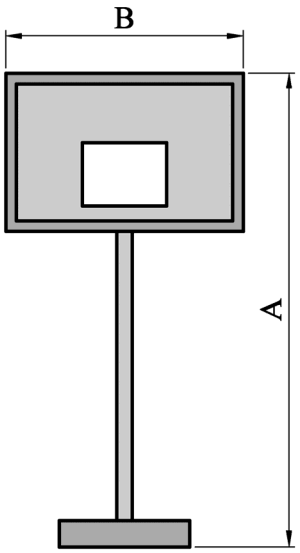
Area of the label = _____square units.

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

A: _____

B: _____





9. **Fig.1** shows a set of blocks.

Choose the correct elevation for **Fig.1** from the options shown in **Fig.2** below.

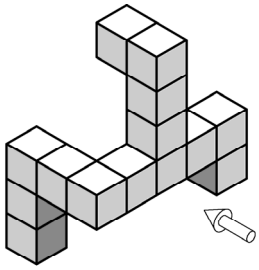


Fig. 1

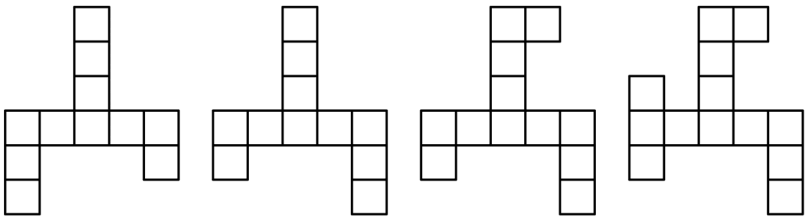


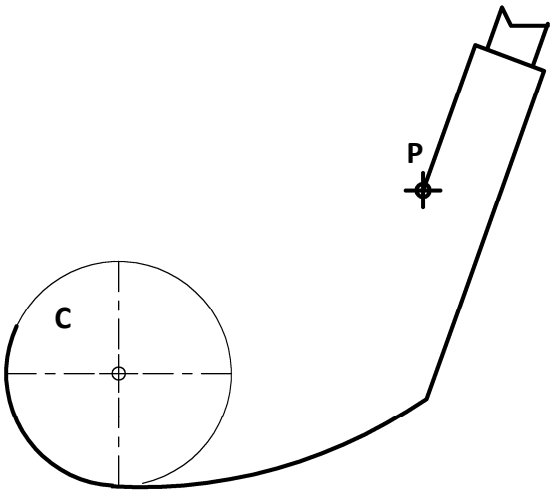
Fig. 2

Answer:_____

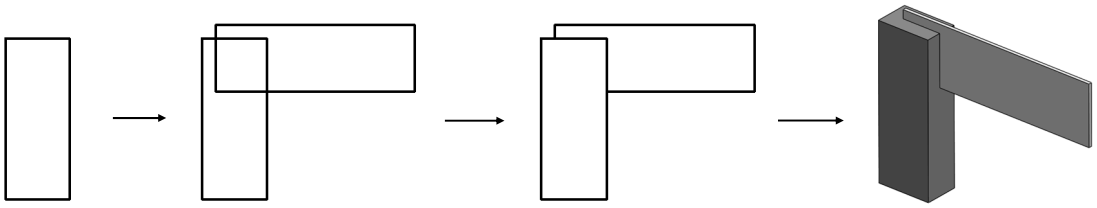
10. The figure shows the incomplete outline of a golf club.
Also shown is a 3D graphic of the club.

Complete the drawing of the golf club 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 create the drawing of the try-square.



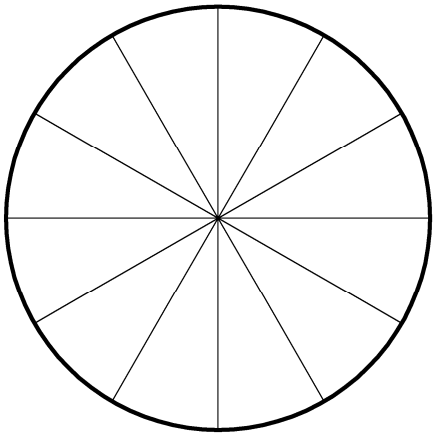
Any **two** CAD commands: _____

_____

12. Twelve students were surveyed about the type of music that they listened to.

Shade the pie chart to represent the following results from the survey.

- Pop - **6** students
- Rock - **4** students
- R & B - **2** students



13. **Fig. 1** shows a design for a windfarm logo.
The design is based on a regular hexagon and arcs as shown.

Fig. 2 shows an **incomplete** drawing of the design. Complete the drawing showing all constructions.

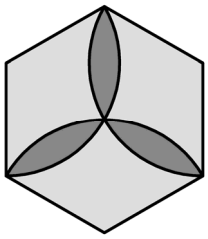


Fig. 1

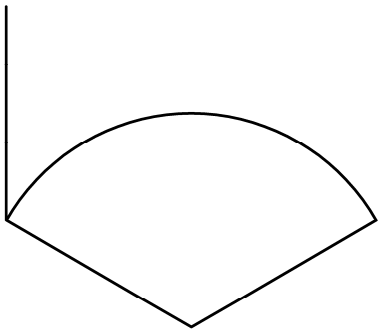
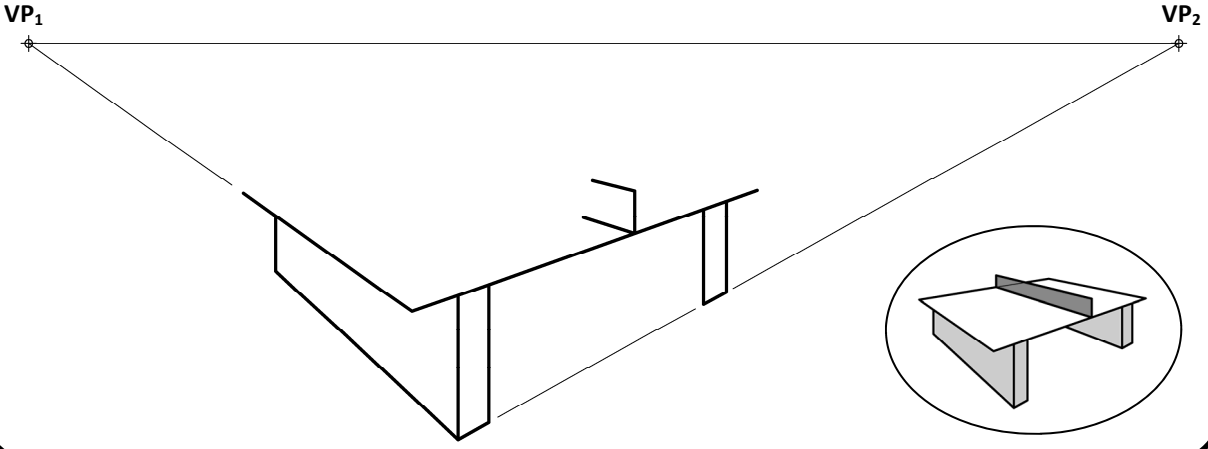


Fig. 2

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

Complete the perspective drawing of the table.



15. **Fig. 1** shows a logo for a badminton club.

Complete the design of the logo in **Fig. 2** by constructing an axial symmetry in the line $\mathbf{LL_1}$.

Colour **or** shade the completed logo.

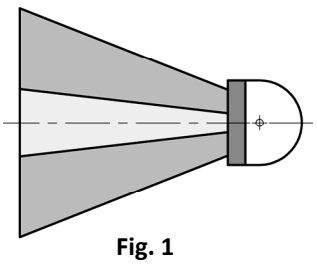


Fig. 1

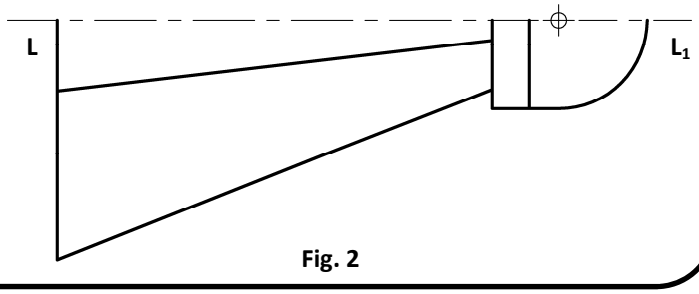


Fig. 2

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