



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2014

Technical Graphics

Ordinary Level

Section A

(120 marks)

Monday, 16 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.

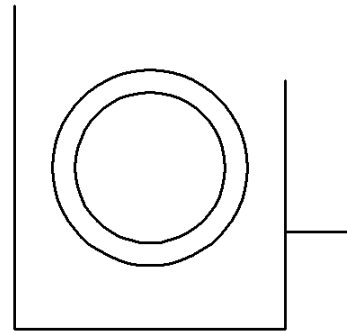
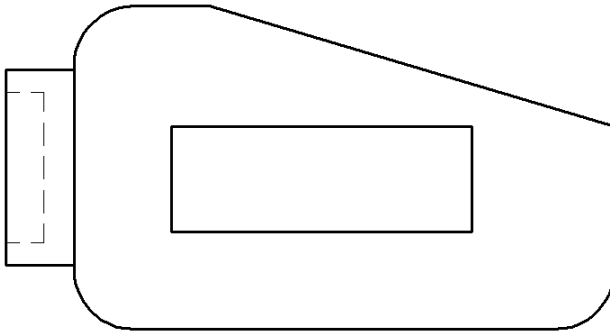
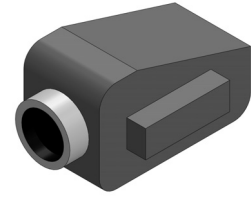
Examination Number:

Centre Number

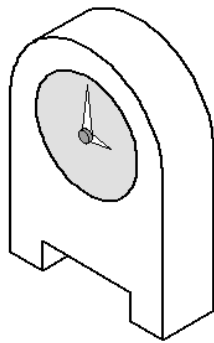
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

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

- 1.** Shown is the elevation and **incomplete** end view of a data projector. Also shown is a 3D graphic of the projector.
Insert the missing lines in the end view.



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



- 3.** List **one** advantage and **one** disadvantage of a digital camera, as shown.

Advantage:

Disadvantage:



4. Fig. 1 shows a webcam logo inscribed in the square ABCD.

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

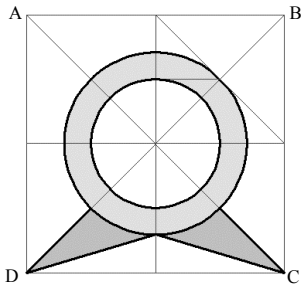


Fig. 1

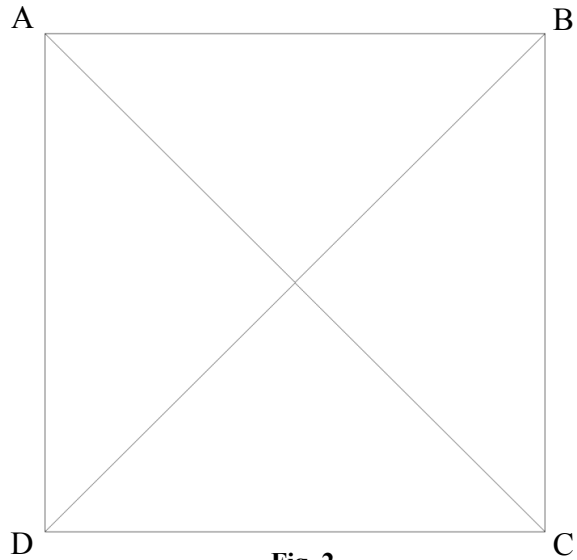


Fig. 2

5. Fig. 1 shows a curling stone and handle. The line PL is a tangent to the ellipse at P. Locate the focal points of the ellipse in Fig. 2 and complete the handle of the curling stone by drawing the tangent PL.

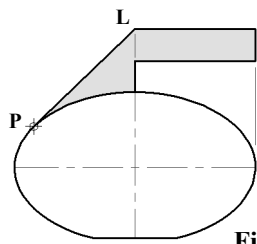


Fig. 1

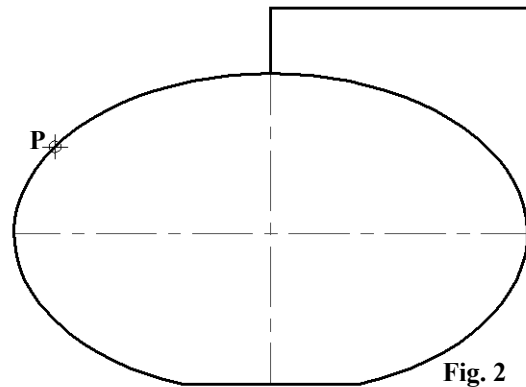
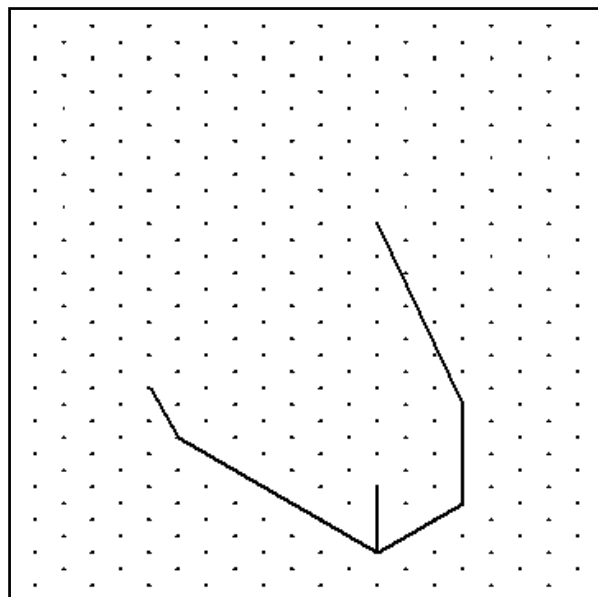
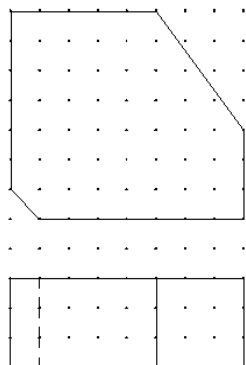
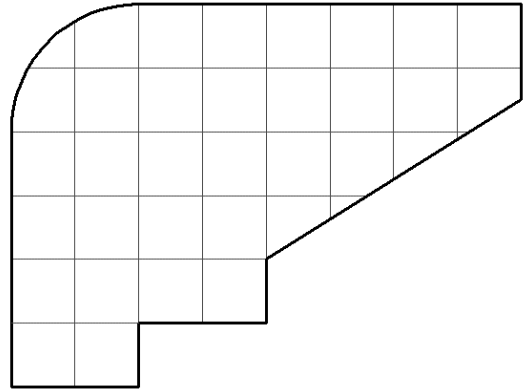
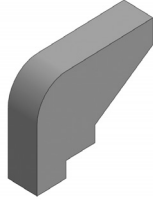


Fig. 2

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



7. The outline of an ink cartridge is shown. Also shown is a 3D graphic of the cartridge.

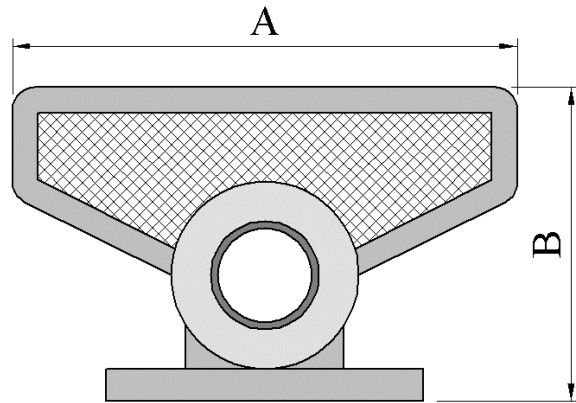


Write down the area of the ink cartridge in square units.

1 square = 1 square unit.

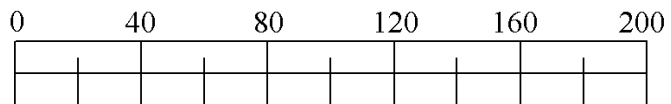
Area of the cartridge: _____ square units.

8. Using the scale provided, **measure** and **write down** the dimensions **A** and **B** for the games-console camera shown.

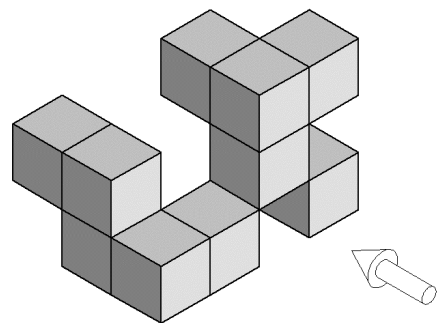


A: _____

B: _____



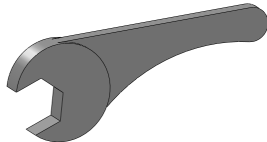
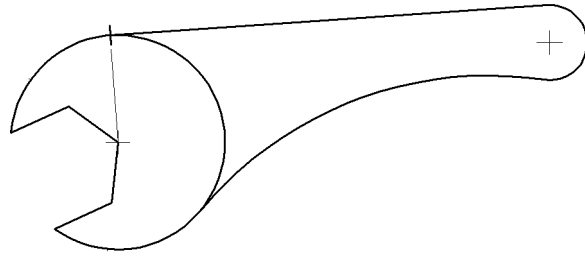
9. The figure shows a set of blocks. Draw, in the space provided, an elevation of the blocks in the direction of the arrow.



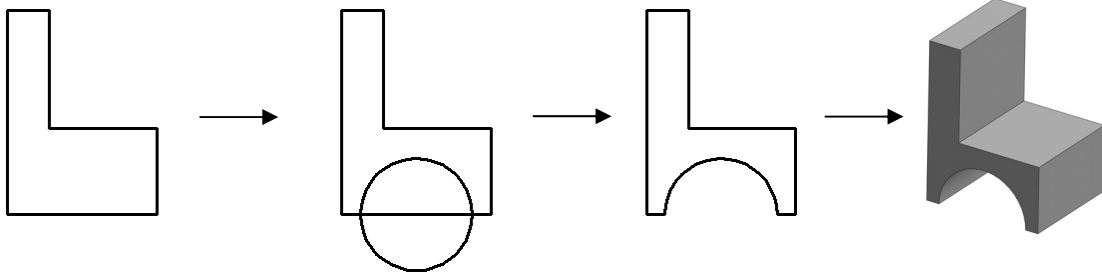
10. The drawing shows the outline of a wrench.

The centres of the arcs and one point of contact are shown.

Show clearly the remaining points of contact.



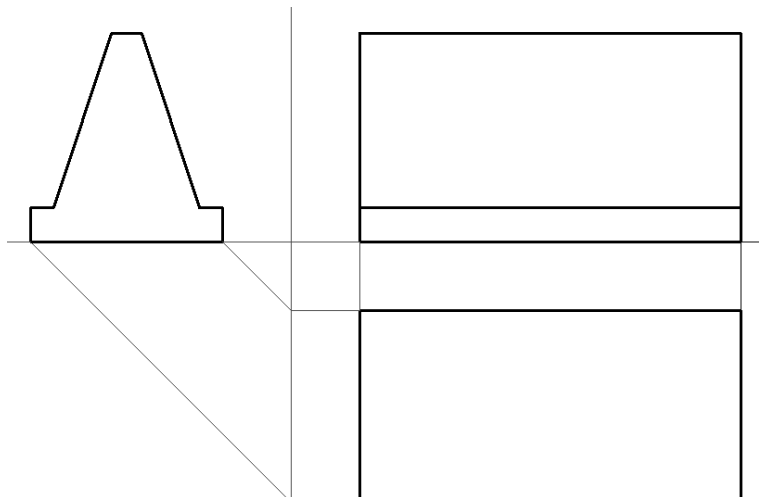
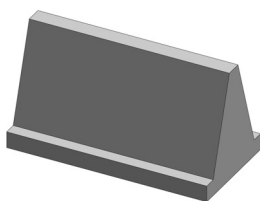
11. Write down **any two** CAD commands used to produce the drawing of the garden seat.



Any **two** CAD commands: _____

12. The figure shows the elevation, end view and **incomplete** plan of a motorway safety barrier. Also shown is a 3D graphic of the barrier.

Complete the plan of the barrier.



13. Fig. 1 shows the design of a logo for a bakery. The logo is based on a semi-hexagon.

Fig. 2 shows an **incomplete** view of the logo. Complete the logo by drawing the semi-hexagon. Show all constructions.

Colour **or** shade the completed logo.

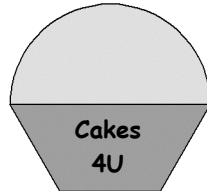


Fig. 1

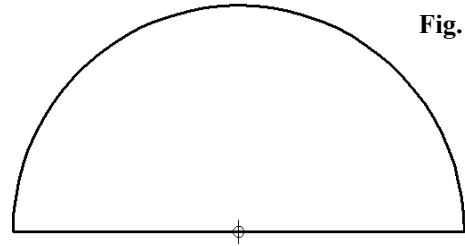
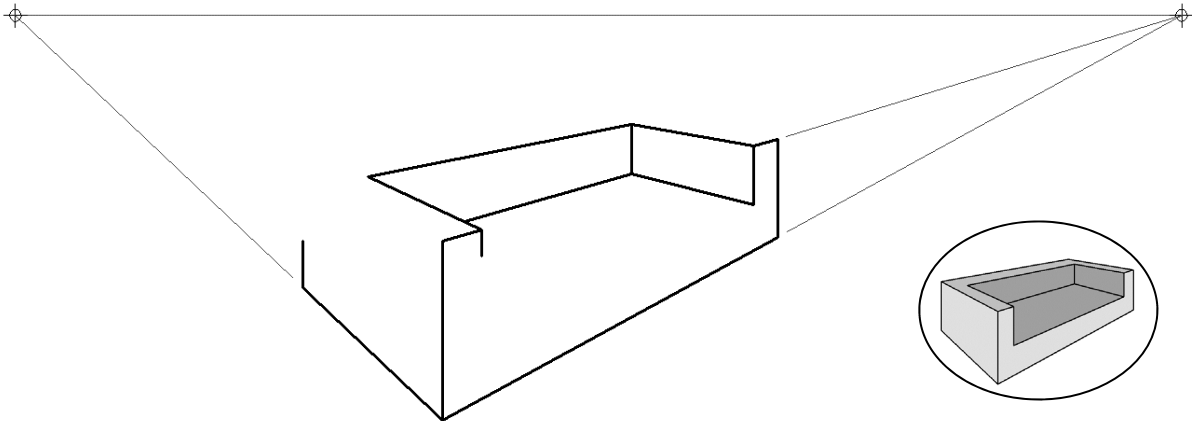


Fig. 2

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



15. Fig. 1 shows a logo based on a microphone.

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

Colour **or** shade the completed logo.

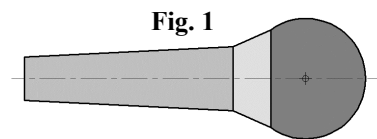


Fig. 1

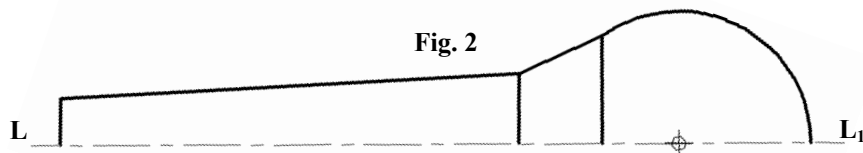


Fig. 2

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