Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination, 2014

Technical Graphics
Ordinary Level
Section B
(280 marks)

Monday, 16 June
Morning 9:30 - 12:00

Instructions

(a) Answer **any four** questions. All questions carry equal marks.

(b) The number of the question must be distinctly marked by the side of each answer.

(c) Work on **one side** of the answer paper only.

(d) Write your examination number on each sheet of paper used.

SECTION B. Answer **any four** questions. All questions carry equal marks.

**1.** The graphics show a design for a stapler.

Draw:

(a) An elevation in the direction of arrow **A**.

(b) A plan projected from the elevation.

(c) Insert **any four** dimensions.
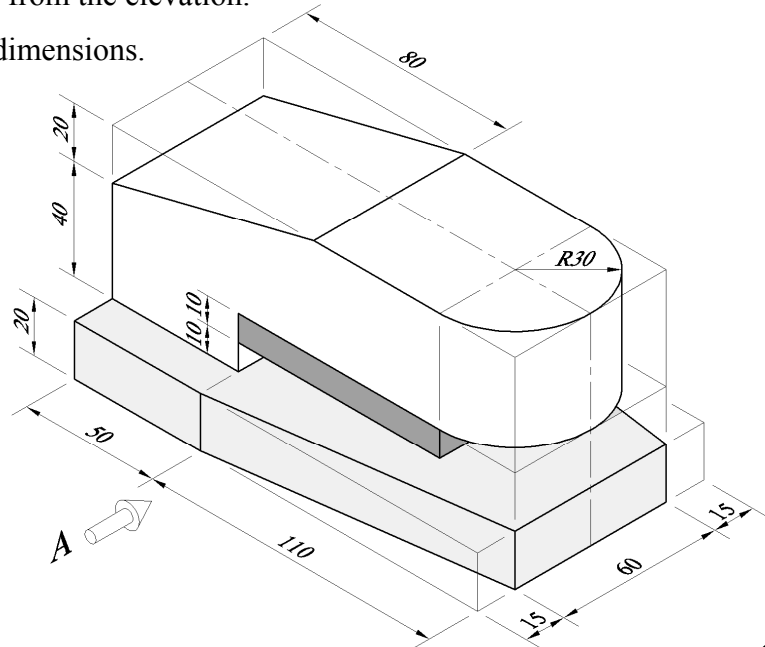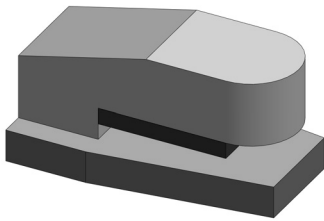
2. The graphics show the logo for the **SUPERUGBY** league. The logo is based on circles and on an ellipse as shown.

The curve **ABCD** is elliptical. **AC** is the **major axis** of the ellipse and is 120 mm long. **OB** is half the **minor axis** and is 40 mm long.
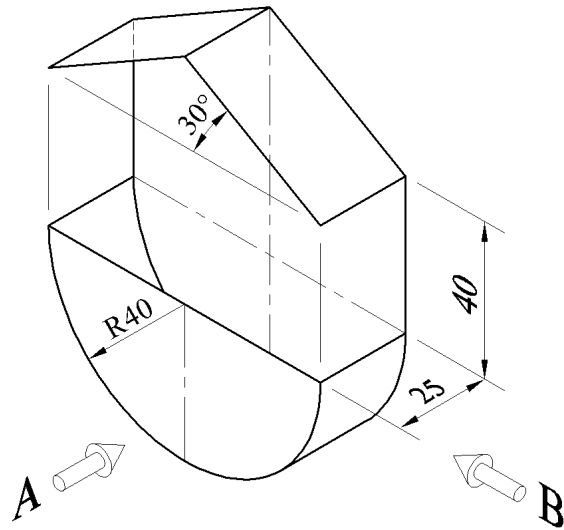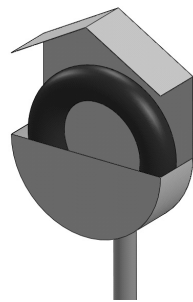
Draw the given ellipse and complete the logo showing clearly all constructions.
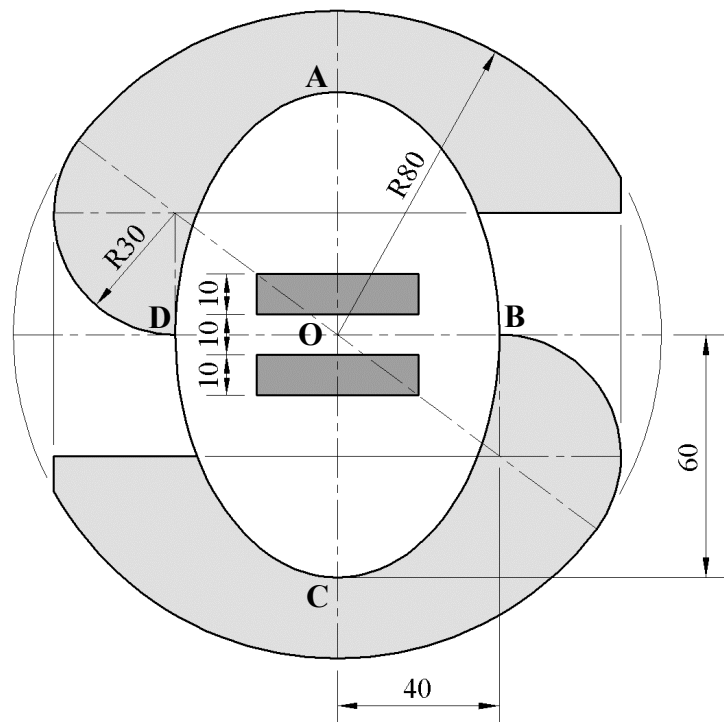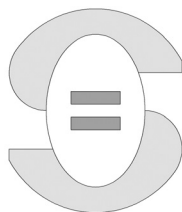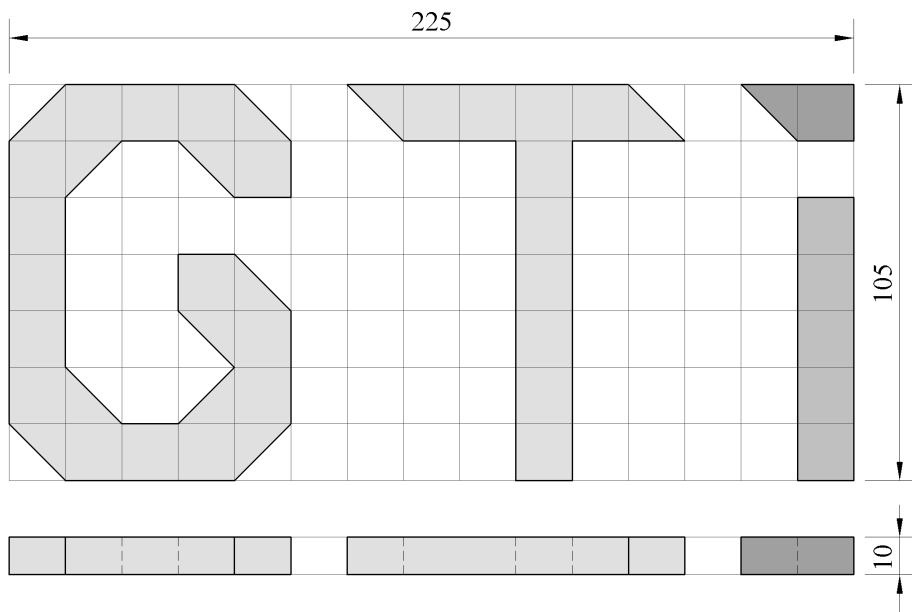
3. The graphics show a holder for a lifebuoy.

Draw:
(a) An elevation in the direction of arrow **A**.

(b) An end view in the direction of arrow **B**.

(c) The complete **surface development** of the lifebuoy holder.

30°

R40

40

25

A

B

4.

225

105

10

The figure shows the elevation and plan of the initials **GTi** used by many car companies.

The grid in elevation is made up of 15 mm squares and the thickness in plan is 10 mm.
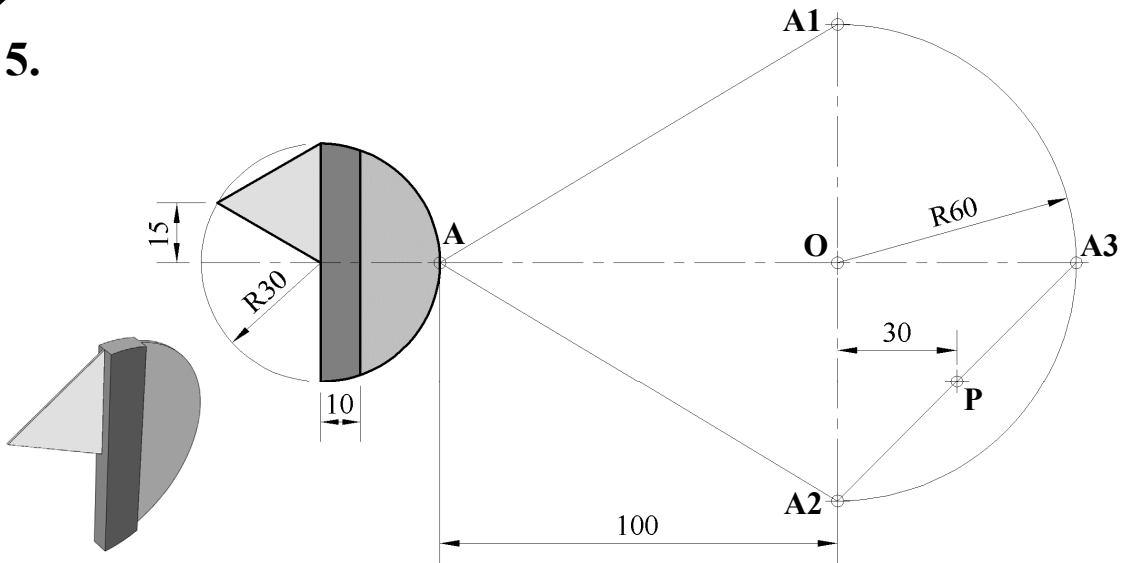
Draw **one** of the following views:
(a) An **isometric** view of the initials.

or

(b) An **oblique** view of the initials.

Note: The solution must be presented on standard drawing paper.

5.

The graphics show the design of a logo for a golf society.

(a) Draw the given logo and then locate the points **A**, **O**, **A1**, **A2**, **A3** and **P** as shown.

(b) Find the image of the given logo under the following transformations:

(i) From point A to A1 by a **translation**;
(ii) From point A1 to A2 by an **axial symmetry** in the line **A-A3**;
(iii) From point A2 to A3 by a **central symmetry** in the point **P**.

6. The figure shows a design for a toy hammer.

Draw the given design showing clearly how to find the centres of the circles shown.

Show all construction lines, tangents and points of contact.