

Pre-Junior Certificate Examination, 2016

Technical Graphics

Ordinary Level

Section B

(280 marks)

Time : 2½ Hours

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 name, your school's name and your teacher's name on each sheet of paper used.*

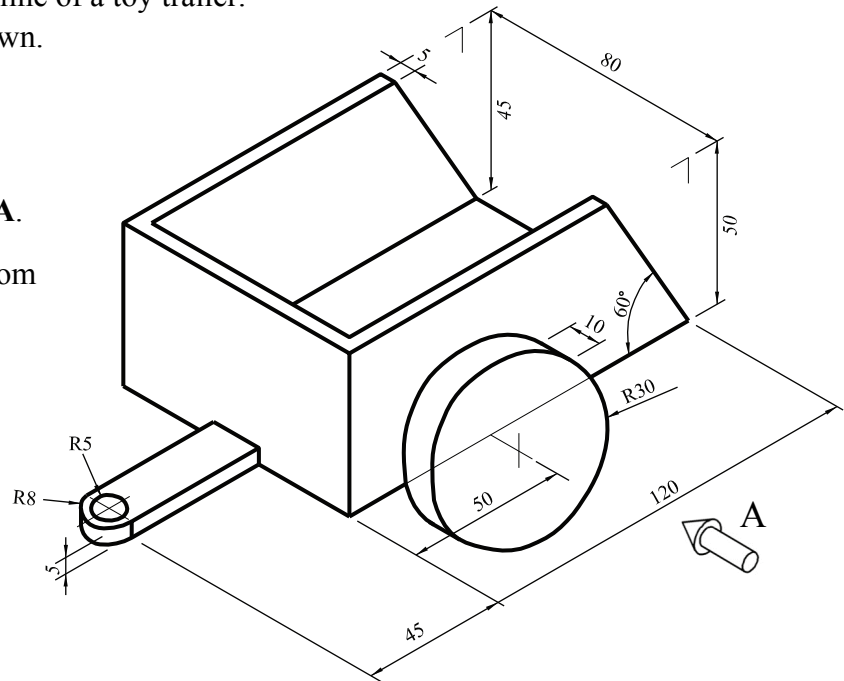
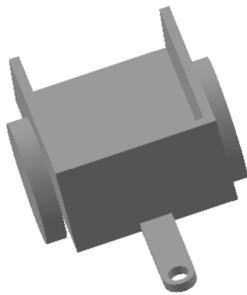
SECTION B. Answer **any four** questions. All questions carry equal marks.

1. The figure shows the outline of a toy trailer.

A 3D graphic is also shown.

Draw:

- (a) An elevation in the direction of arrow **A**.
- (b) A plan projected from the elevation.
- (c) Insert **any four** dimensions.

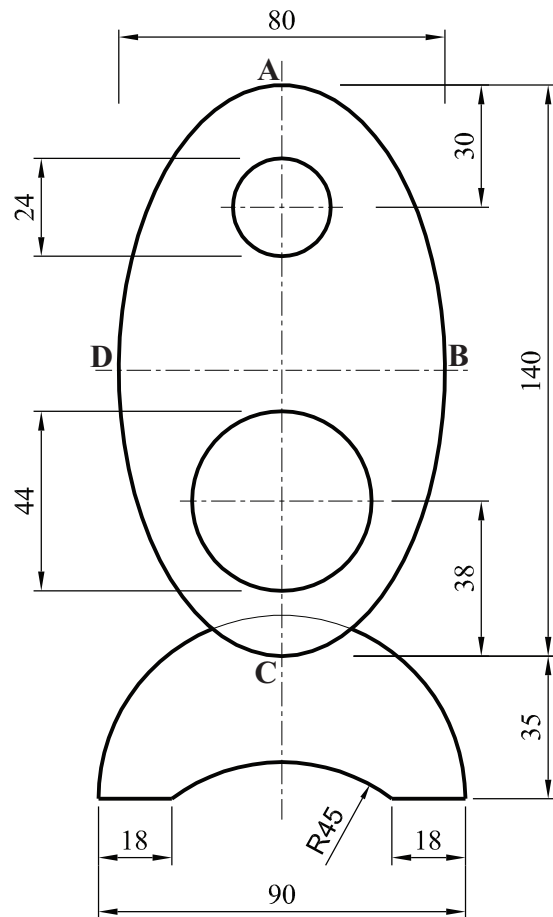


2. The figure shows the logo for a rugby training programme.

The logo is based on circles and an ellipse as shown.

The curve **ABCD** is an ellipse. **AC** is the **major axis** of the ellipse and is 140 mm long. The minor axis is 80 mm long.

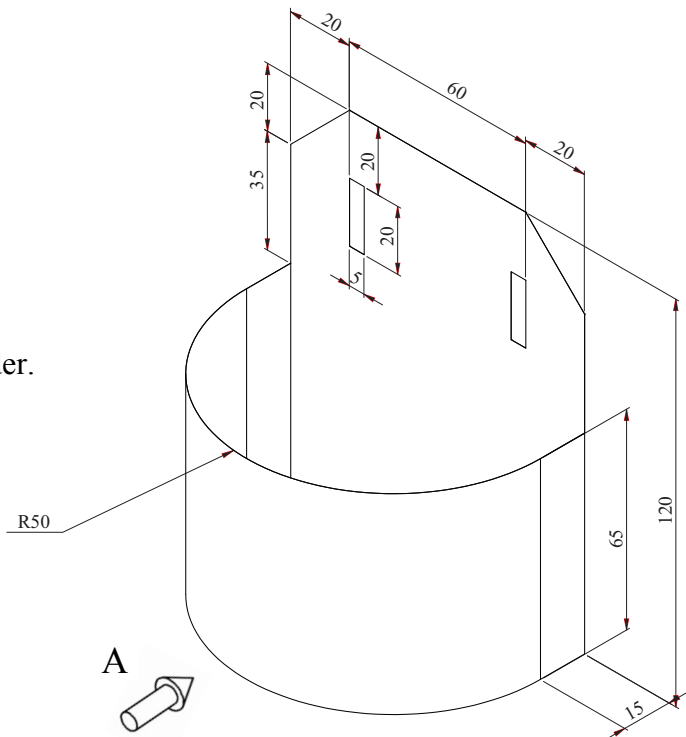
Draw the given ellipse and complete the logo showing clearly all constructions.



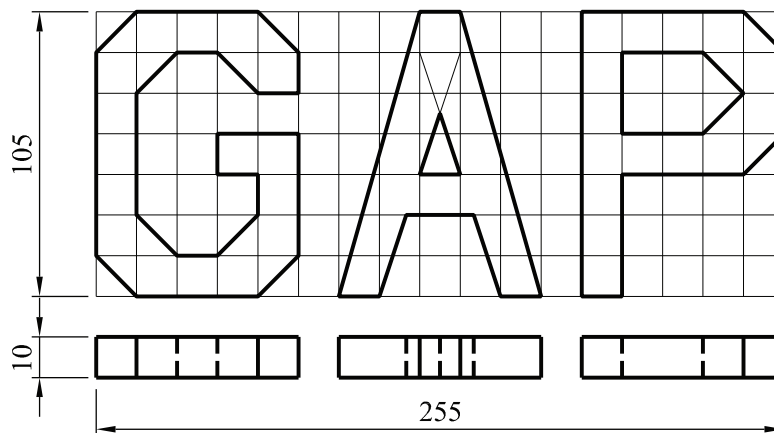
3. The figure shows an open holder. It will fix a tool onto a tool belt.

Draw:

- (a) A elevation in the direction of arrow A.
- (b) A plan projected from the elevation.
- (c) The complete **surface development** of the open holder.



4.



The figure shows the elevation and plan of the initials **GAP**, an American clothing company.

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:

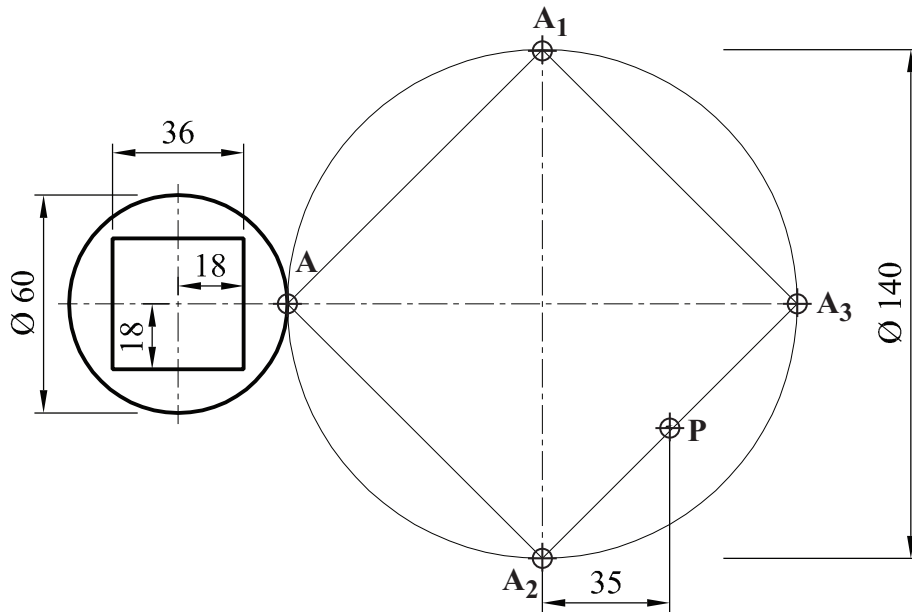
- (a) An **isometric** view of the initials.

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 stop button on a CD player.

- (a) Draw the given logo and then locate the points **A**, **A₁**, **A₂**, **A₃** and **P** as shown.
- (b) Find the image of the given design under the following transformations:
- From point **A** to **A₁** by a **translation**;
 - From point **A₁** to **A₂** by an **axial symmetry** in the line **A-A₃**;
 - From point **A₂** to **A₃** by a **central symmetry** in the point **P**.

6. The figure shows a design for a helmet.

Draw the given design.

Show all construction lines, tangents and points of contact.

