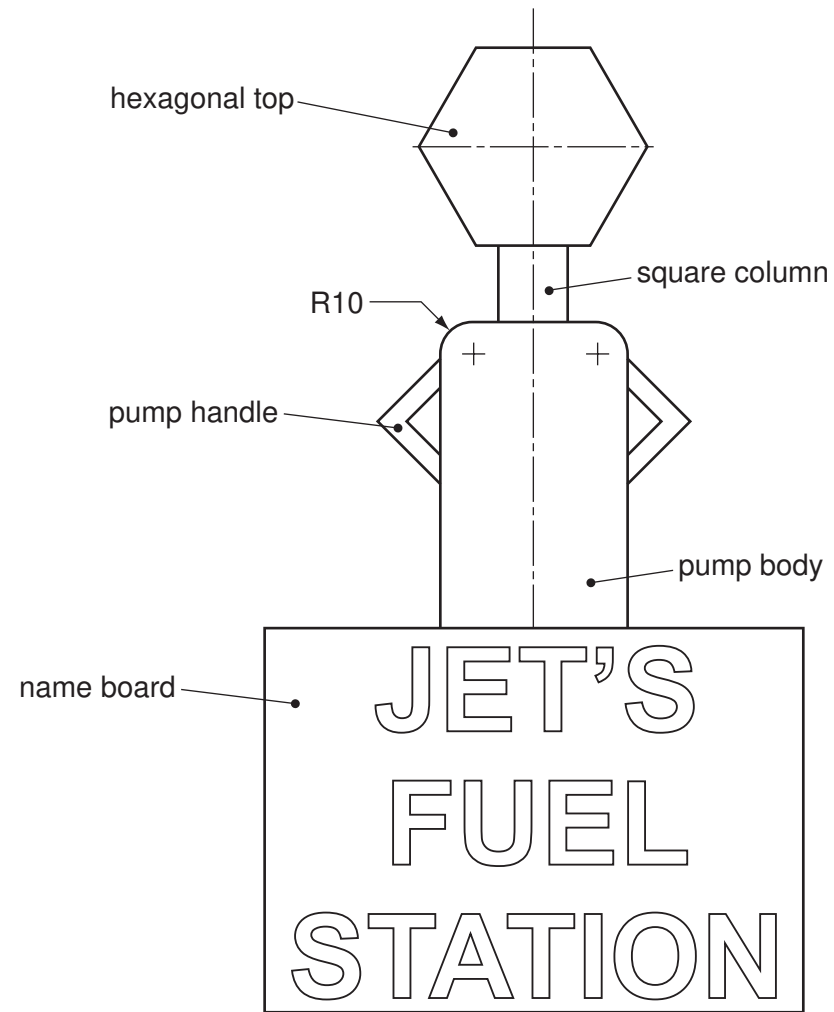**Section A**

Answer **all** questions in this section.

The drawing below shows details of a logo and name board for a fuel filling station called JET'S.
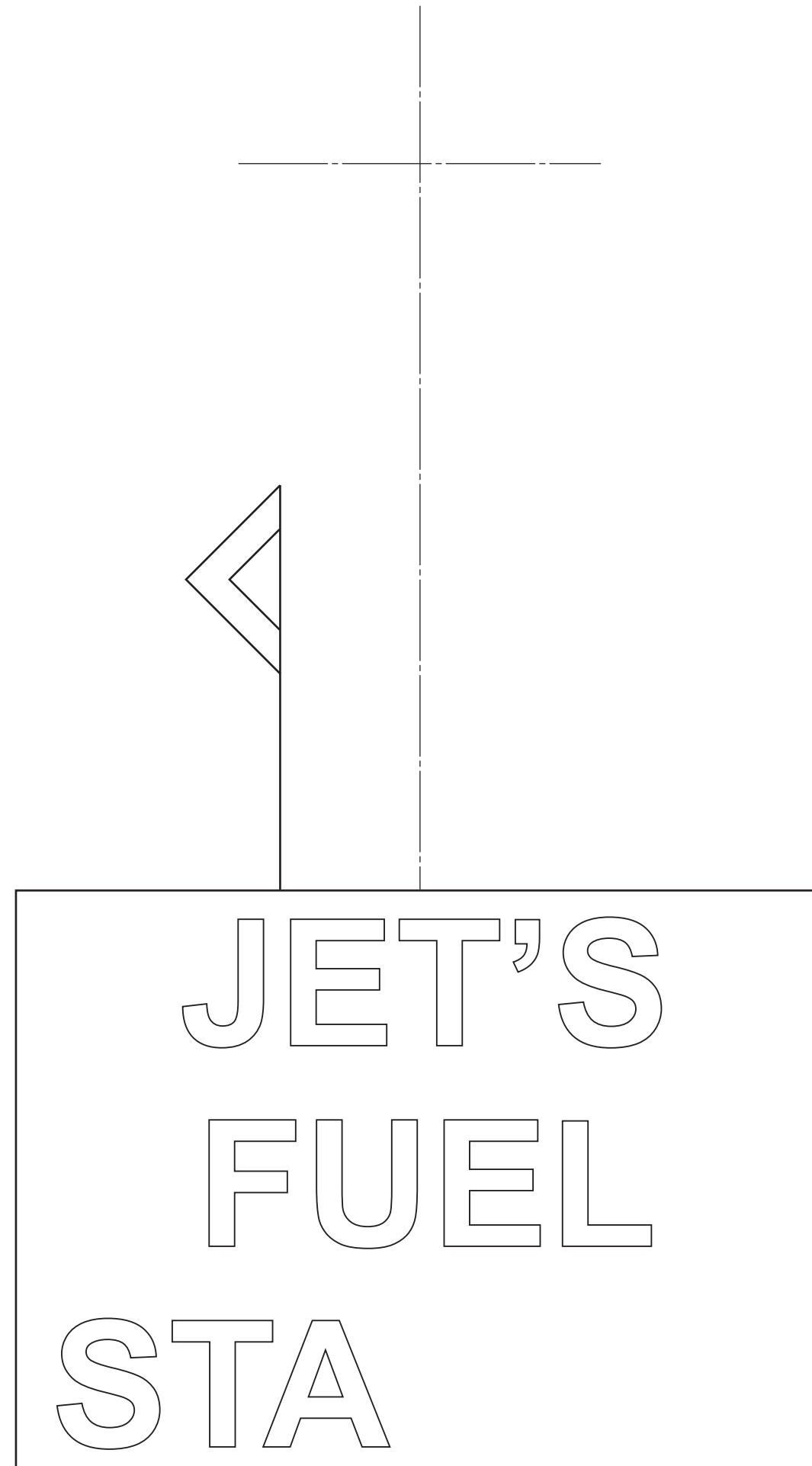The logo is an arrangement of geometrical shapes representing a fuel pump and the filling station owner.

Complete the full size view of the logo by drawing on the centre lines given in the space provided to the right:

(a) the hexagonal top 30 side;

(b) the square column 20 side;

(c) the rectangular pump body 50 × 80 with R10 corners at the top;

(d) the second pump handle 45° × 90°. [9]

Complete the name board for JET'S FUEL STATION by adding the **four** missing letters.
All the letters must be to the same height and style as those given. [6]

Centre Number ....   Candidate's Number ....   Candidate's Surname ....   Other Names ....   **[Turn over**

A3 Customers of the fuel filling station are given a loyalty points card. The points collected at each re-fuelling can be exchanged later for motoring accessories.

The points card comes in a protective plastic envelope.

The development (net) of this envelope is shown below.

semi-circular flap
R44

mi-circular flap
R27

A

fold line
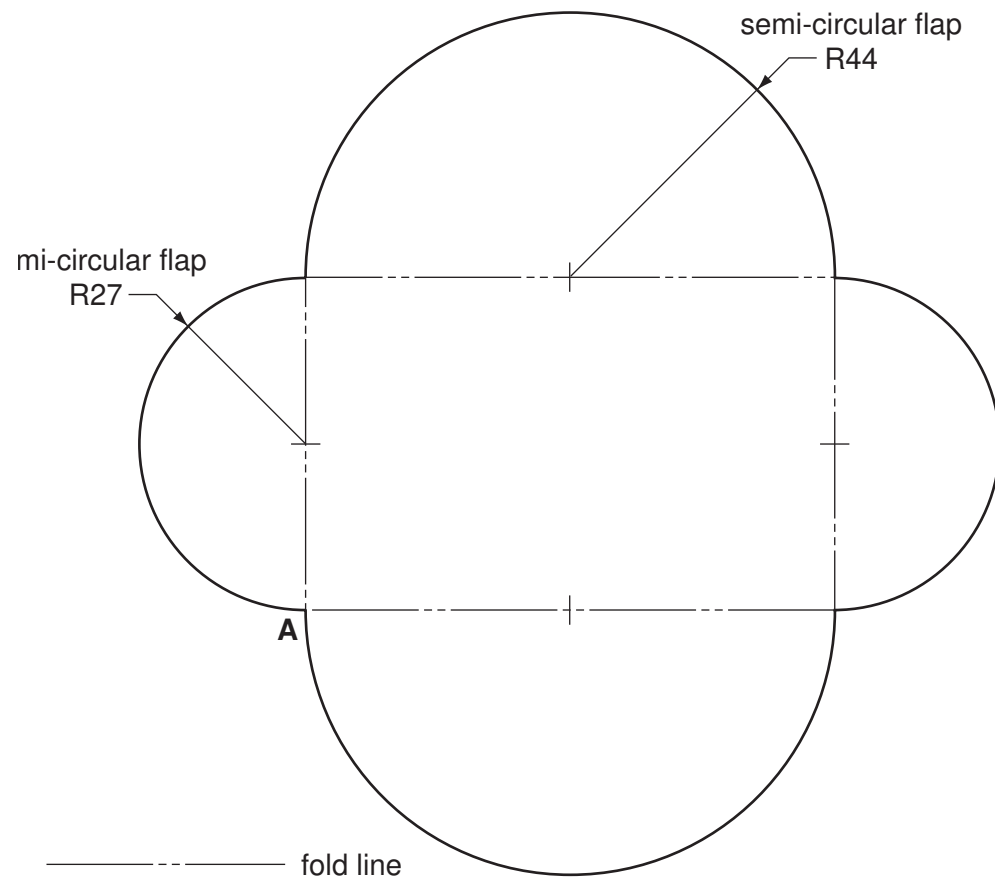
(a) Draw full size the development (net) of the plastic envelope in the space below.
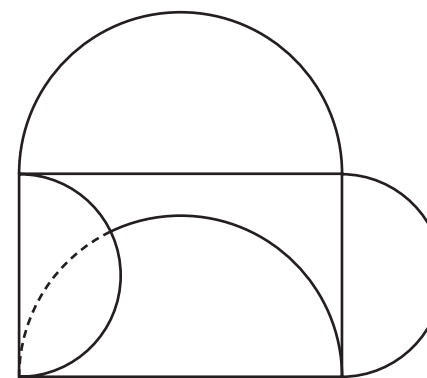Use corner **A** as your starting point. [6]

A

When the flaps are folded over in the correct order, the top flap can be tucked into a slot in the bottom flap to form a secure envelope for the points card.

(b) Complete sketches 3 and 4 to the right to show how the flaps should be folded and the position of the slot that is required. [4]
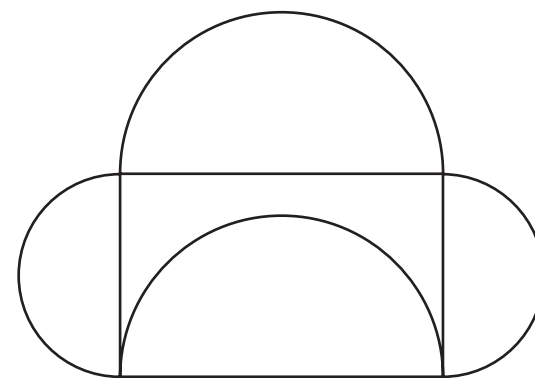
1

2

3

4

Section B
Answer **either** question **B4** or **B5**.

B4 The owner of the fuel filling station is to produce an advertising postcard to send to customers. The postcard is to be folded by the customer to make a desk tidy.

The folded desk tidy and the outline of the postcard are shown below.

(a) Divide accurately the long side of the postcard into three equal parts so that, when folded, the postcard will have three faces as shown in the pictorial view. [3]

(b) To a scale of 1:1, draw the logo shown on one of the faces you have created. Estimate any missing dimensions. [15]

(c) Using a suitable graphical method, complete each of the remaining two faces of the desk tidy with a visual chart on each showing:

(i) the quantity and types of fuel sold last year; [4]

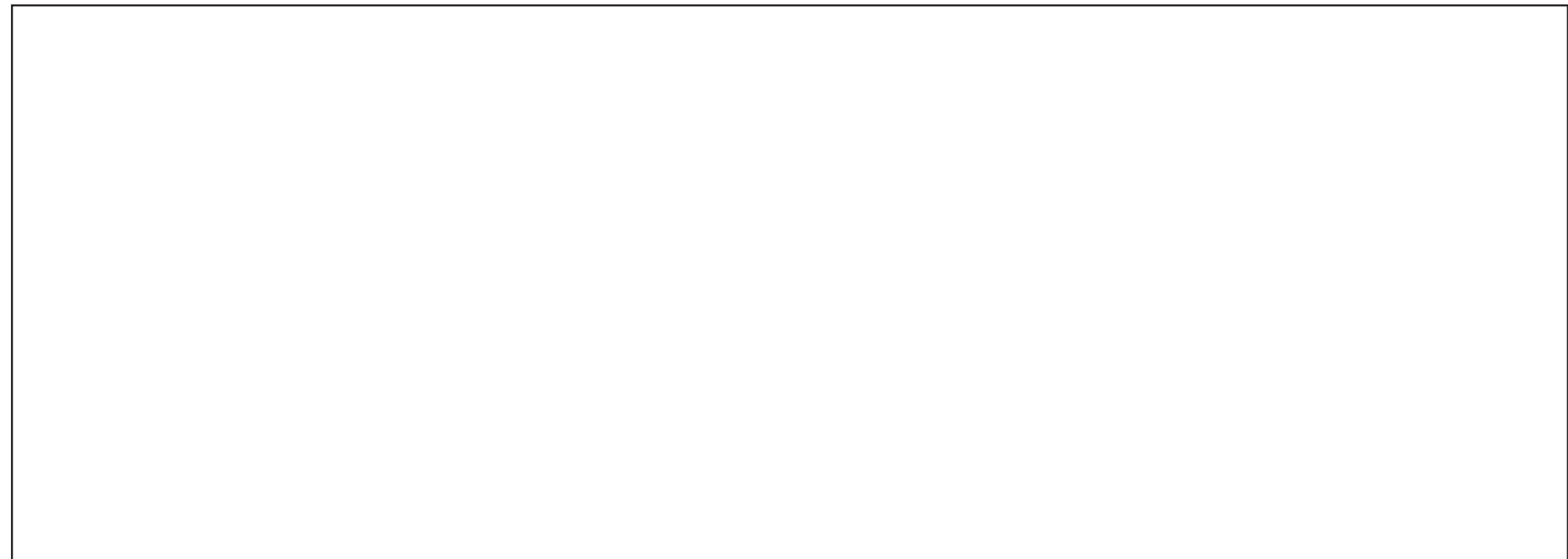**(ii)** the loyalty points required for the three gifts listed. [3]
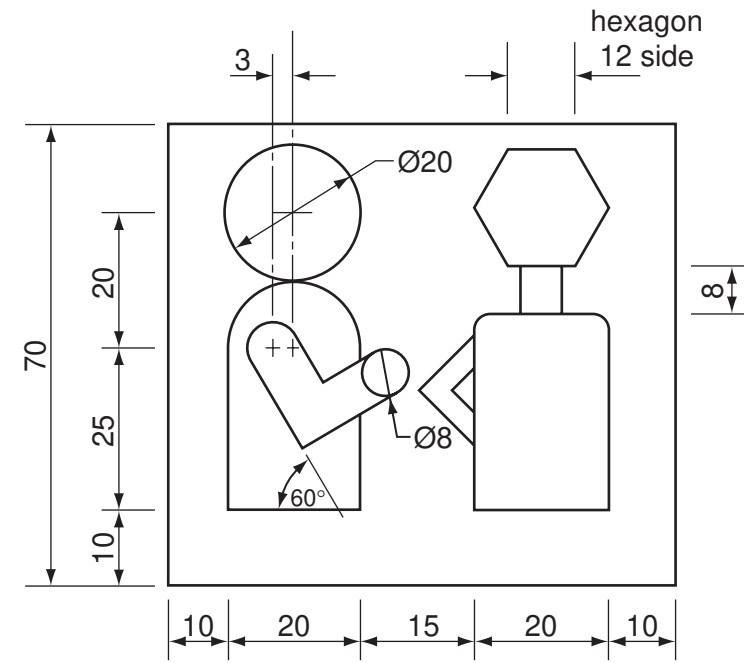
Last year's fuel sales	
	Litres
Unleaded Petrol	900 000
LPG	300 000
Engine Oil	150 000
Diesel Oil (Gazole)	450 000

Loyalty points required	
	points
screen cleaning kit	100
set of spare bulbs	400
small tool set	600

logo
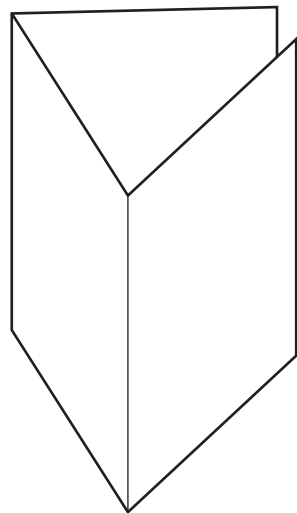
postcard folded to make a desk tidy

outline of postcard

Centre Number .... Candidate's Number .... Candidate's Surname .... Other Names .... **[Turn over**

Sheet 2 of 2

B5 A counter top display unit is used by the fuel filling station owner to promote his concept jet car.

The display is made from 10 mm foamboard.

250

15°

50

500

partial ellipse
major axis 200
minor axis 120

Ø100

150

150

100

R150

R100

A

15°

200

100

150

750

300

X
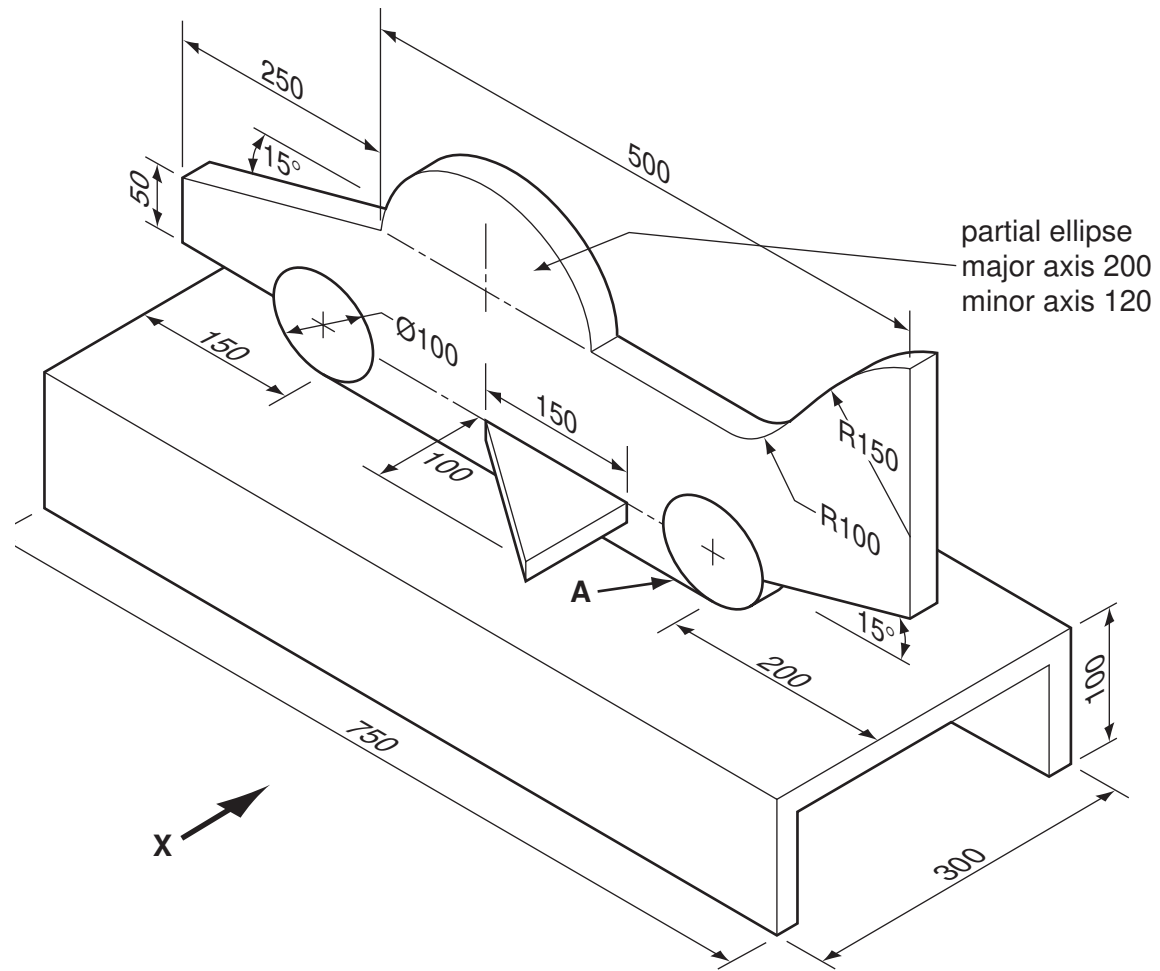
pictorial view of counter top display unit

(a) Draw to a scale of 1 : 5 in the space to the right, the following orthographic views:

(i) a front view in the direction of arrow **X**; [13]

(ii) a plan. [7]

Estimate any missing dimensions.

(b) Draw in the box provided, the correct symbol for the projection you have used. [2]

(c) Use sketches and notes to show a method of joining the jet car to the base at **A**. [3]

orthographic projection symbol

ORTHOGRAPHIC VIEWS OF COUNTER TOP DISPLAY UNIT   SCALE 1 : 5

Answer part **(c)** here