

QUESTION No. 1

Construct a right angled triangle ABC with

- Base AB and
- Side AC 85mm long

Line AB given below is the hypotenuse and base of the triangle.

(7 marks)

A _____ B

QUESTION No. 2

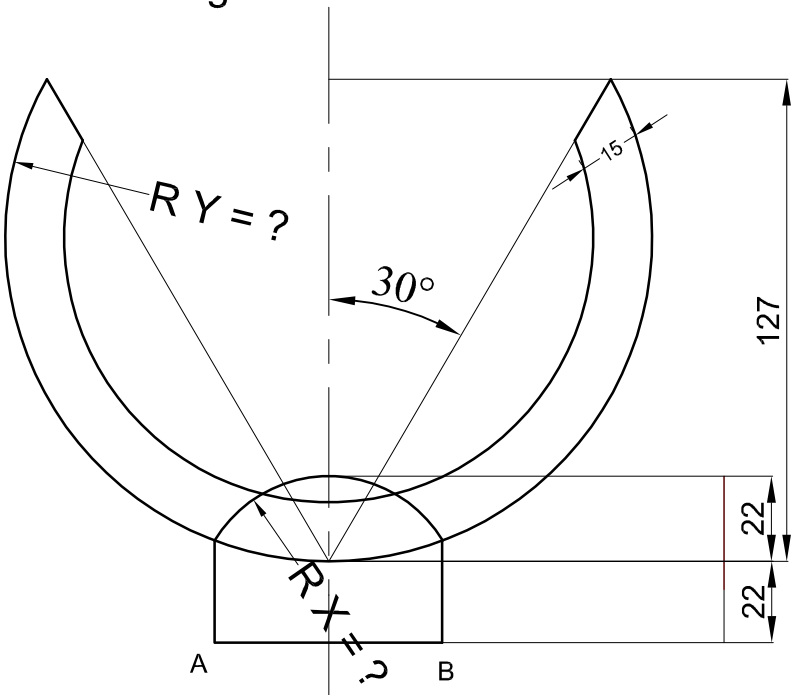
THREE POINT CIRCLES:

Fig 1 shows a model of a trophy. Draw the figure on start line AB given below.

- Show constructions for finding the centres and radii of the three arcs
- Write down the radius of the two circles marked as X and Y
- Radius of circle X = _____
- Radius of circle Y = _____

(12 marks)

Fig 1 TROPHY



A _____ B



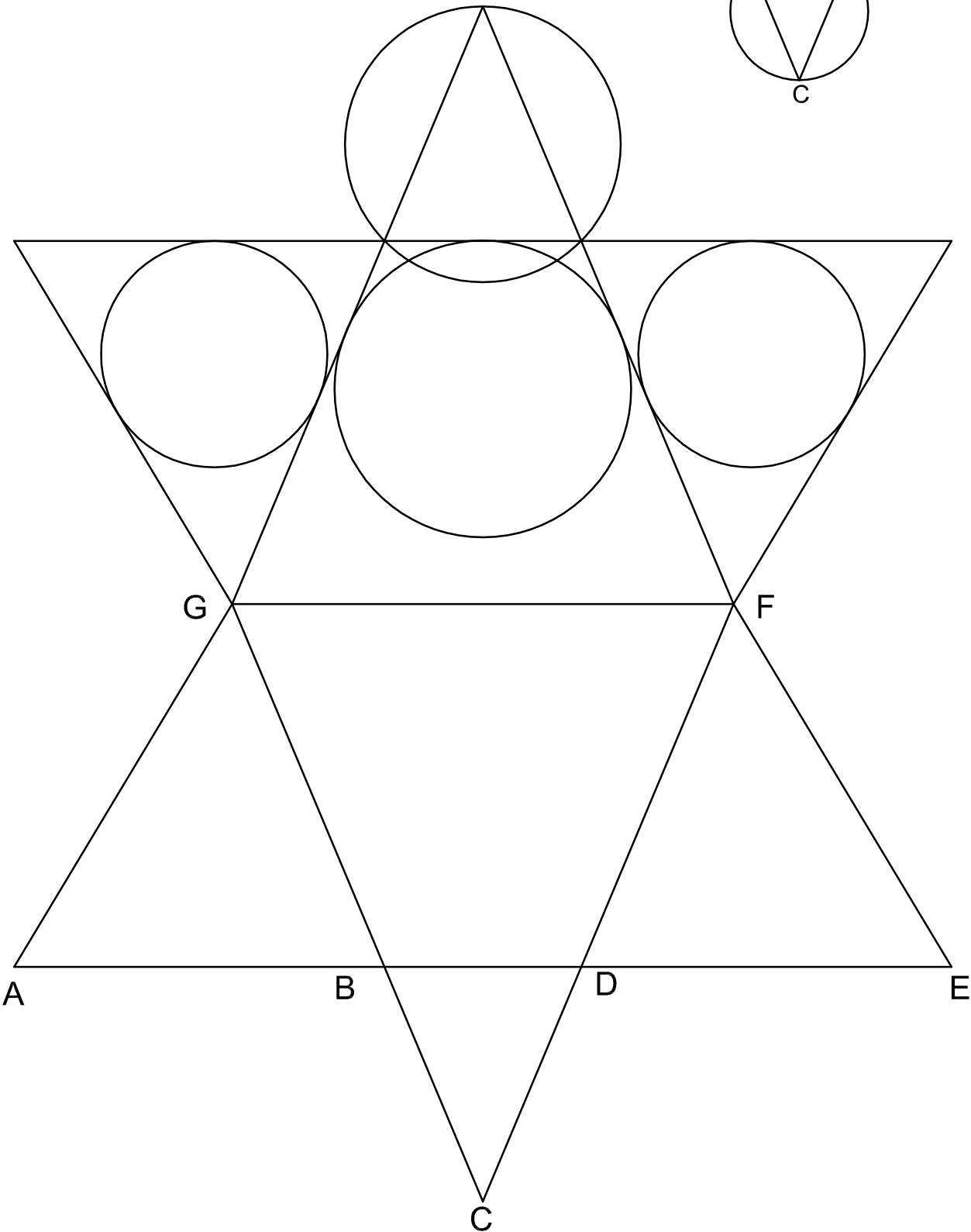
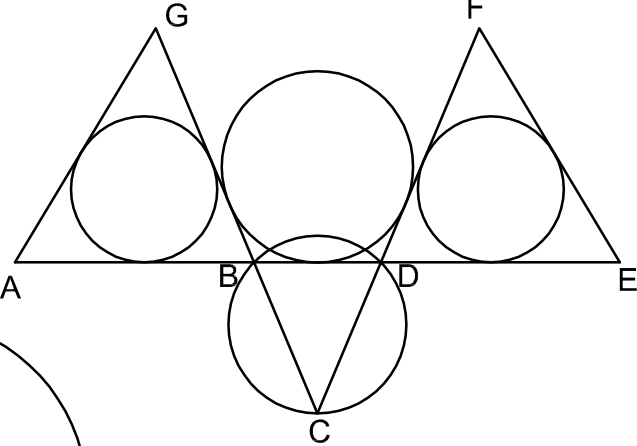
QUESTION No. 3

Fig 2 shows a design which consist of three triangles, 2 inscribed circles, an escribed circle and a circumscribed circle.

Complete the bottom part of the diagram below using proper construction for the:

- a. Inscribed circles
- b. the escribed circle
- c. the circumscribed circle (17 marks)

Fig 2 TRIANGLES WITH CIRCLES



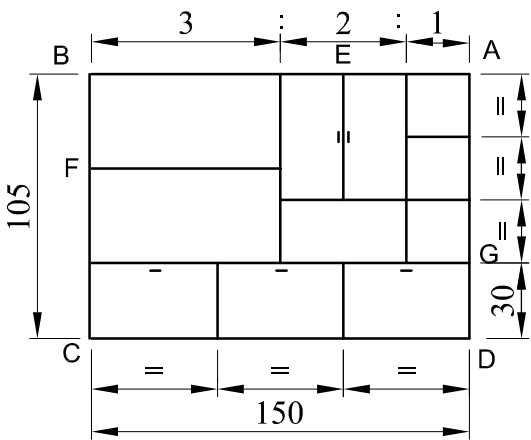
QUESTION No. 4

The figure shows a wall unit. Using line AB below as start line, draw the unit.

- (a) Line AB is divided in the ratio of 1:2:3
- (b) Lines CD and AG are divided into 3 equal parts
- (c) Points E and F are found by bisecting the appropriate lines

Full construction for questions a, b, and c above must be shown. Add handles as shown in fig. above.

(14 marks)



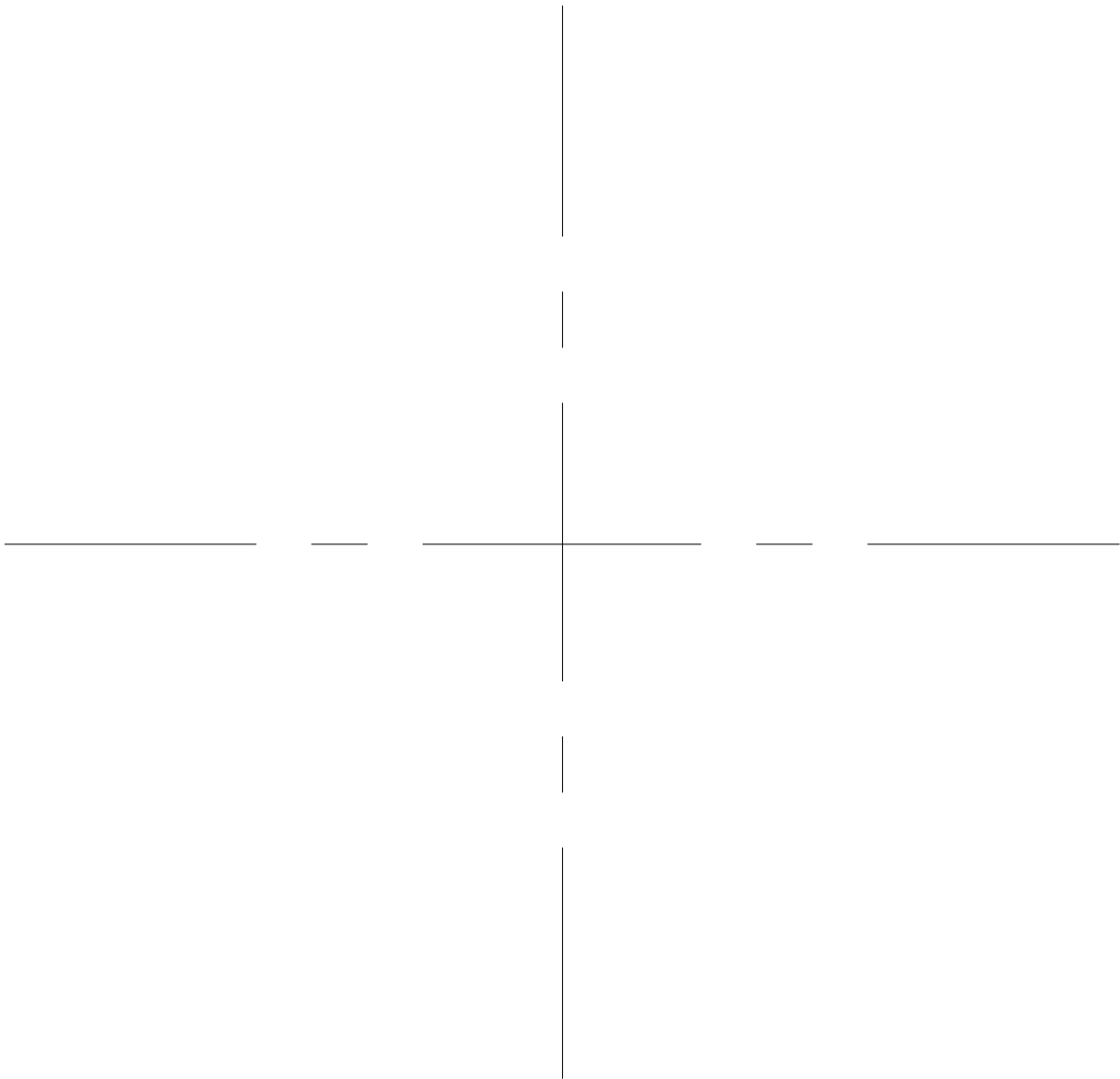
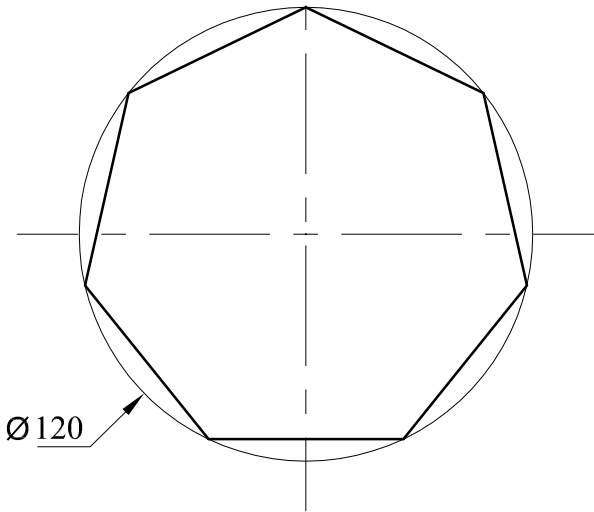
B

A



QUESTION No. 5

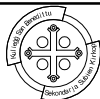
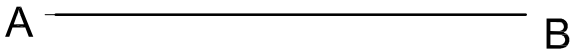
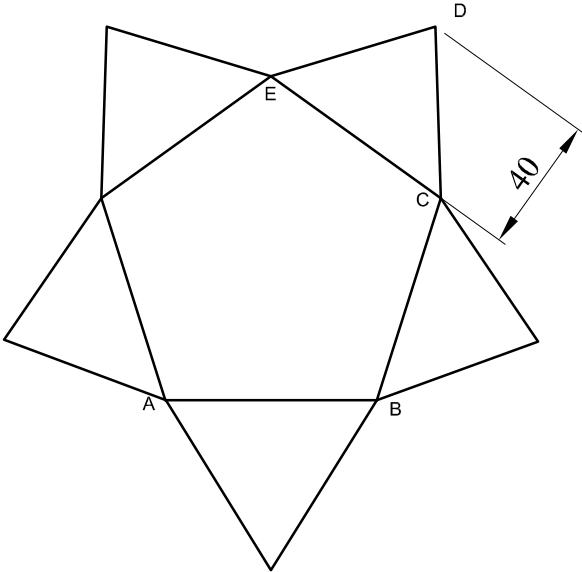
Construct a regular **heptagon in a circle** Ø120mm. Use the centre lines below as start lines.
(12 marks)



QUESTION No. 6

The five pointed star shown consists of a pentagon and five isosceles triangles whose altitude is 40mm.
(a) Construct a regular pentagon on line AB below.
(b) Construct triangle CDE which is an isosceles triangle with an altitude of 40mm. Then draw the other triangles taking the measurement of sides obtained in triangle CDE.

(13 marks)

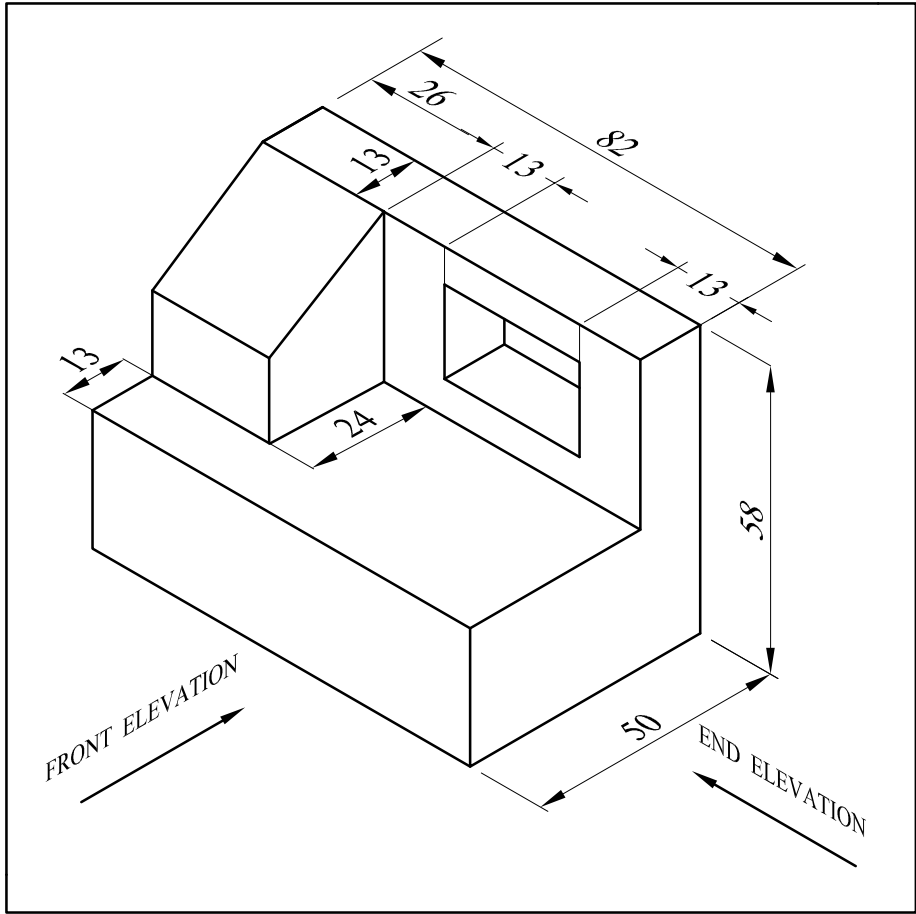


QUESTION No. 7

The figure below shows a pictorial view of a **PRECISION BLOCK**
Draw full size in 1st angle projection:

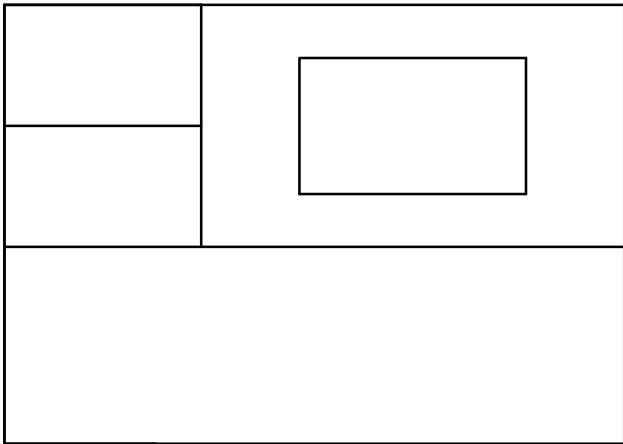
- (a) a plan and
- (b) an end elevation
- (c) Show also in your drawing the symbol of projection used
- (d) In the Name Block provided below print in freehand simple block letters the missing items namely:
NAME, DATE, TITLE (Name of Object) and SCALE.

(25 marks)

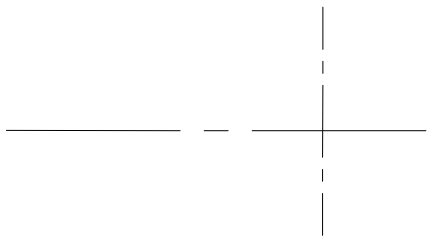


END ELEVATION

FRONT ELEVATION



PLAN



ORTHOGRAPHIC PROJECTION SYMBOL

Sheet 4 of 4

