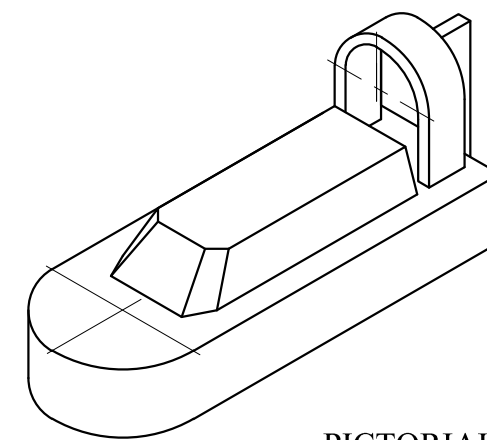


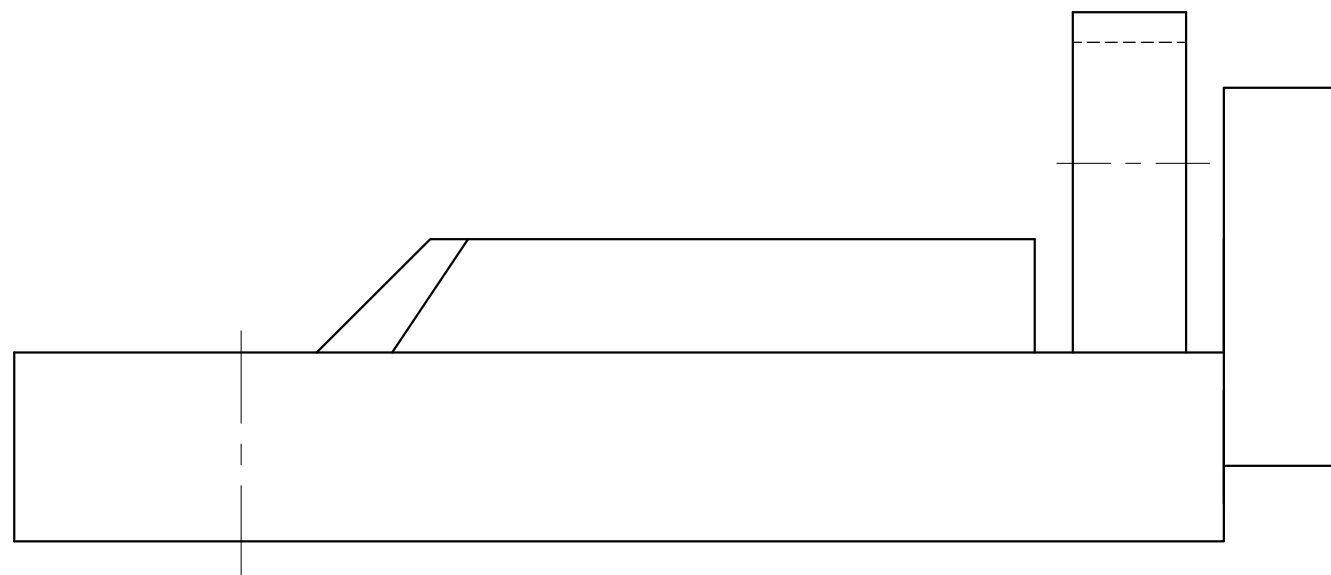
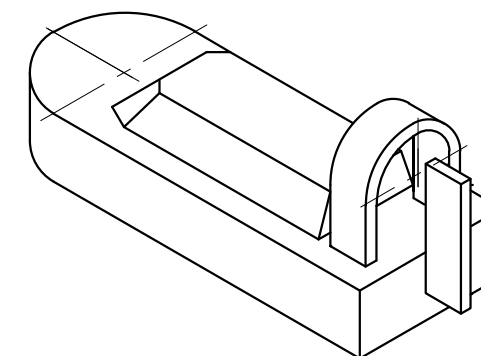
Question 1. Two pictorial views and two orthographic views of a model of a hovercraft (without the rear propellor) are given.
The model is made out of solid wood.

- By projecting lines from the end view and the front view, draw the plan of the model. Include hidden details.
- Lable the end view and plan in neat block letters.
- Draw the symbol of projection used.
- State whether the views are drawn in *1st angle* or in *3rd angle* orthographic projection. Mark an X in the right box at the bottom.
- Lightly shade one of the pictorial views to represent the hovercraft as being made of wood.

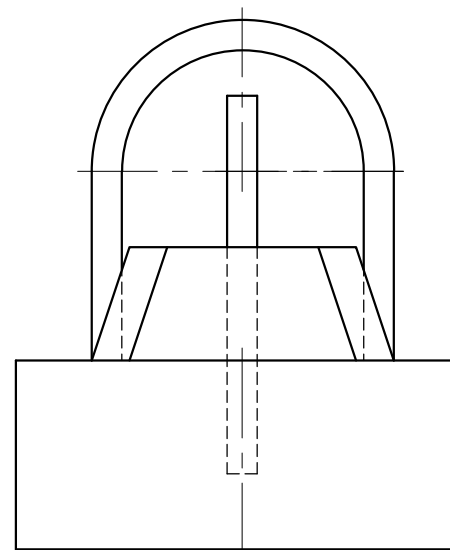
20 marks



PICTORIAL VIEWS



FRONT VIEW

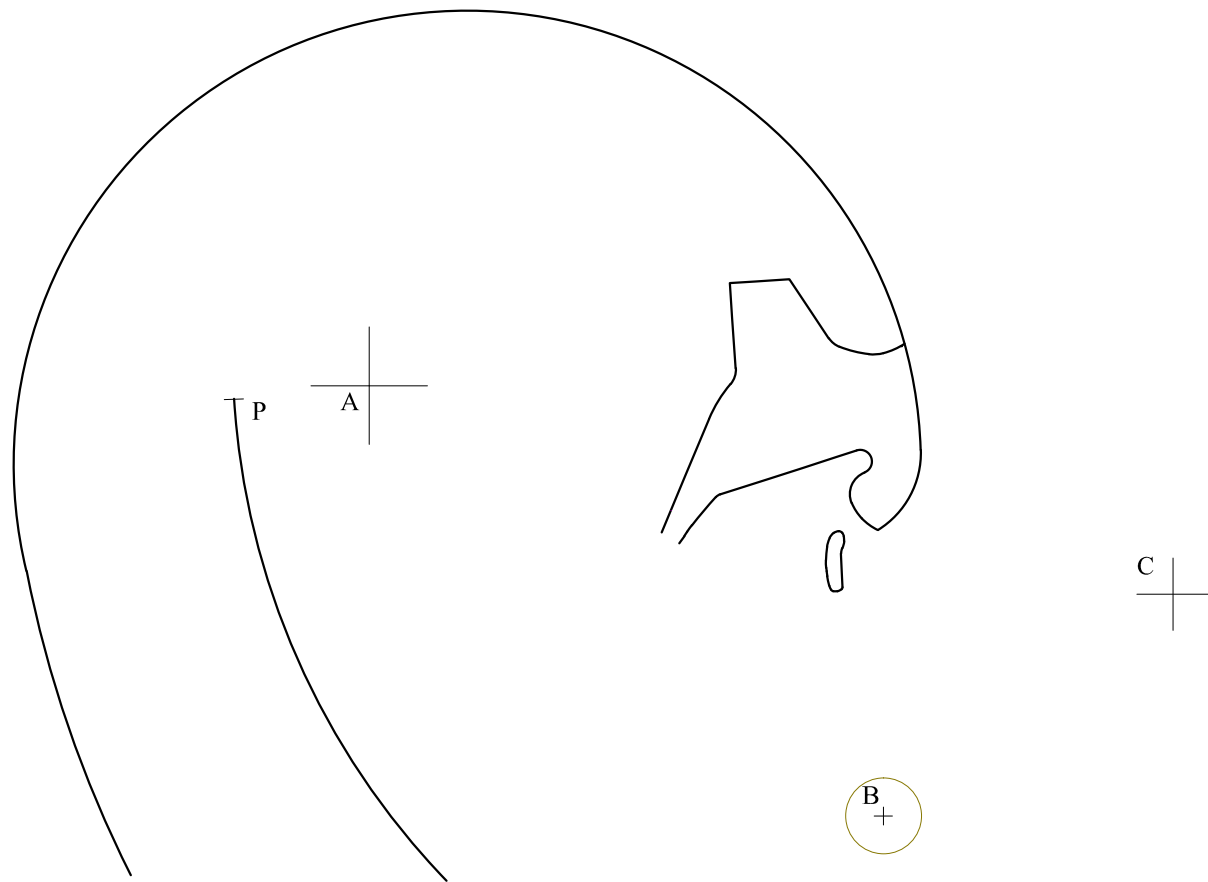
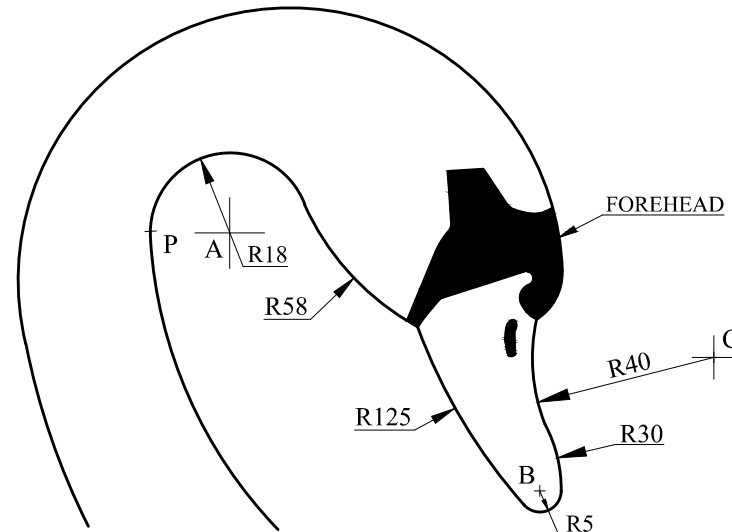
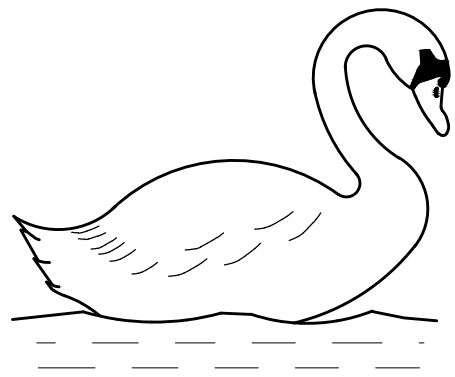


SYMBOL OF PROJECTION

- FIRST ANGLE ORTH. PROJ.
 THIRD ANGLE ORTH. PROJ.

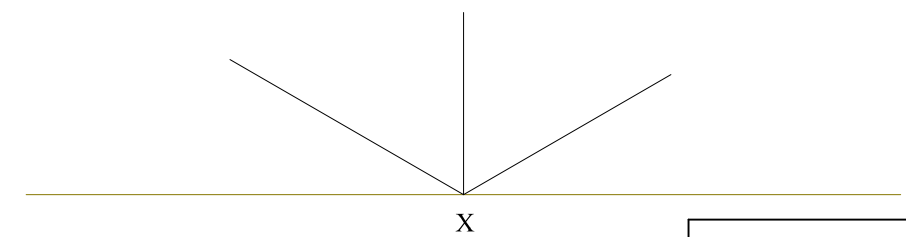
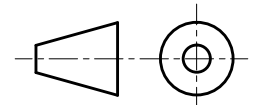
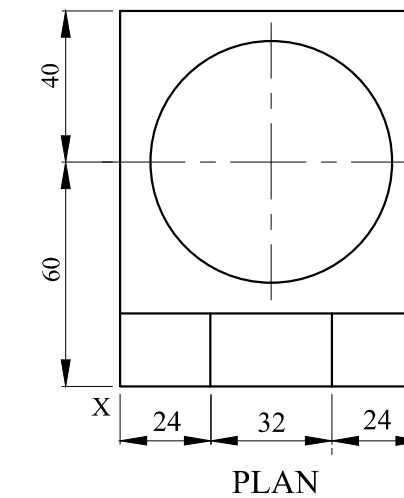
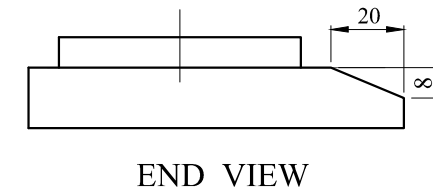
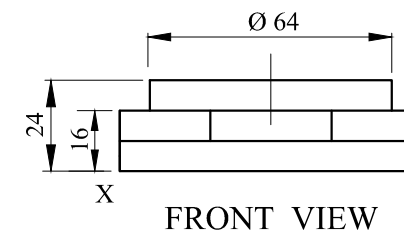
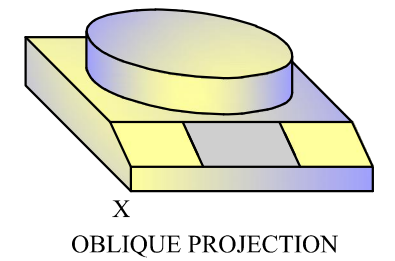
Question 2. The drawing of a swan together with a dimensioned enlarged version of the swan's head are given.
 a) Complete the drawing started below to the given dimensions, showing clearly the construction for obtaining the centre of the arcs.
 b) Show three points of tangency.
 c) Shade the forehead in pencil
 Note: *P* is a point of tangency.

16 marks



Question 3. Three orthographic views and an oblique projection of an electronic kitchen scale are given.
 a) Draw an isometric projection of the scale, putting *X* as the lowest point of your drawing.
 b) Shade the rectangular part where the weight is displayed as if being made of dark coloured glass.

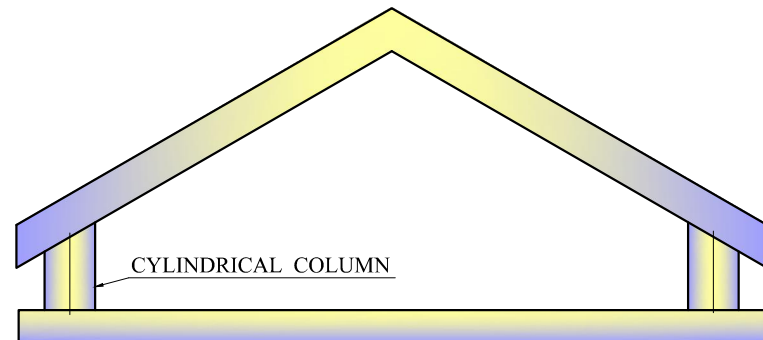
16 marks



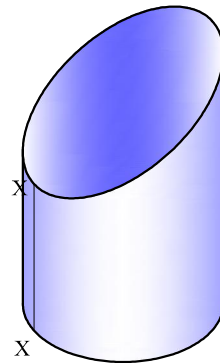
Sheet 2 of 4

Question 4. The slanting ceiling of a wooden model building is supported by a number of cylindrical columns. Each column is to be covered by a thin sheet of aluminium having the shape of a truncated cylinder. A pictorial view, a front view and plan of one of these truncated cylinders are given. Using the necessary construction, draw the development of the truncated cylinder.
 Note: Place the joint line along XX.

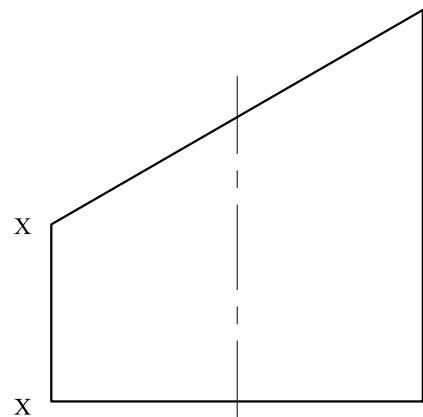
14 marks



MODEL BUILDING



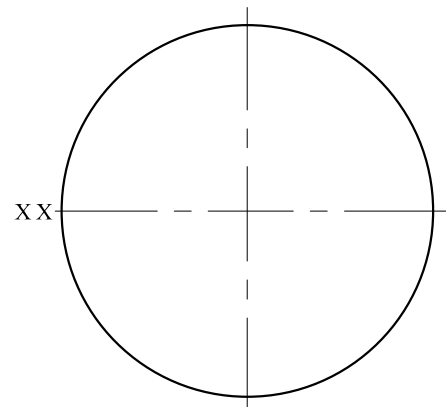
TRUNCATED CYLINDER



FRONT VIEW



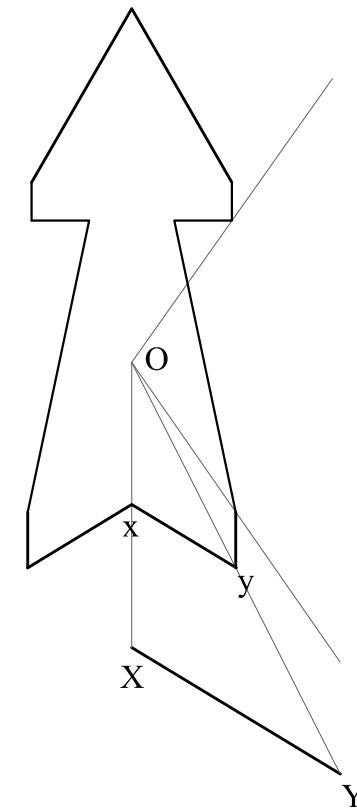
DEVELOPMENT



PLAN

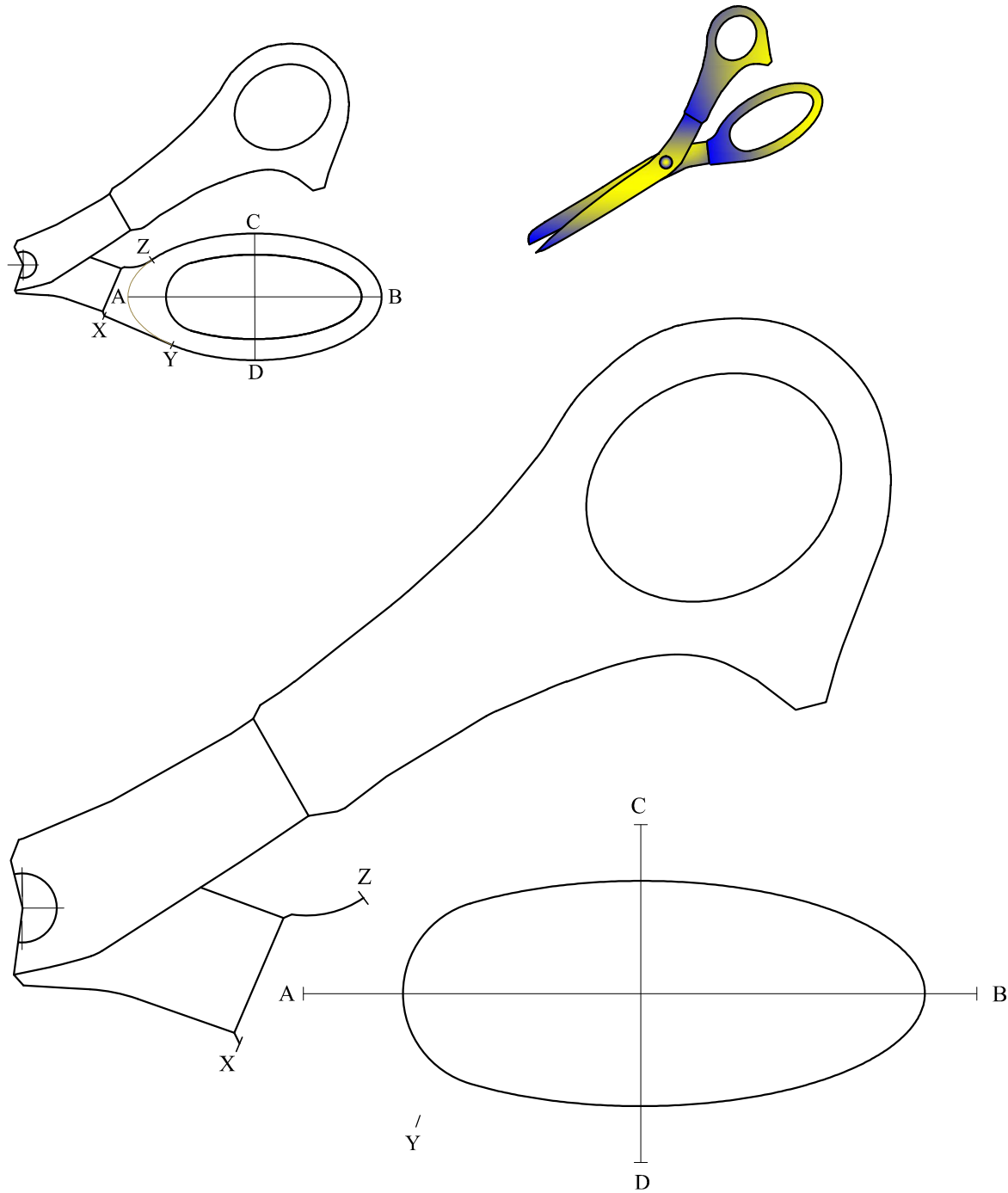
Question 5. The drawing given below shows the outline of an arrow. Enlarge proportionally the size of the arrow by geometrical means such that line xy is enlarged to line XY.

10 marks



Question 6. A scissors is shown below. The lower part of the scissors handle consists of a part ellipse ZCBDY and a tangent XY to the ellipse at point Y. Continue the enlarged version of the scissors given below by drawing:
 a) the part ellipse having a major axis AB and a minor axis CD,
 b) the tangent to the ellipse at Y.

Note: Show all construction required to draw both the ellipse and the tangent.
 10 marks



Question 7. a) The figure below shows a *Safe Condition* sign.

- i) Colour the drawing using the standard colours for such a sign.
- ii) Write down the meaning of the sign.

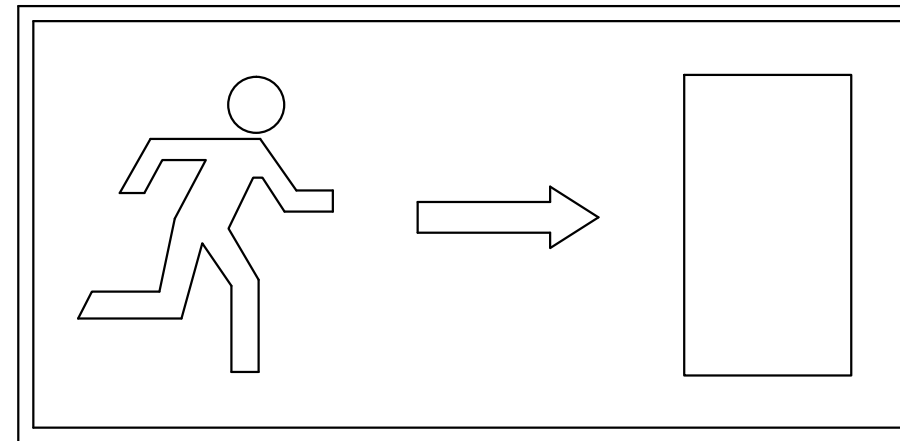
b) The roof of a building site is still without a boundary wall. A sign is needed to warn all persons on the roof to be careful as they might fall over the building.

Draw a *Hazard Warning Sign* to indicate the above message.

- i) Start by drawing preliminary freehand sketches in the rectangle provided.
- ii) Make your final drawing using the given triangular shape.
- iii) Colour your drawing using the standard colours for such a sign.

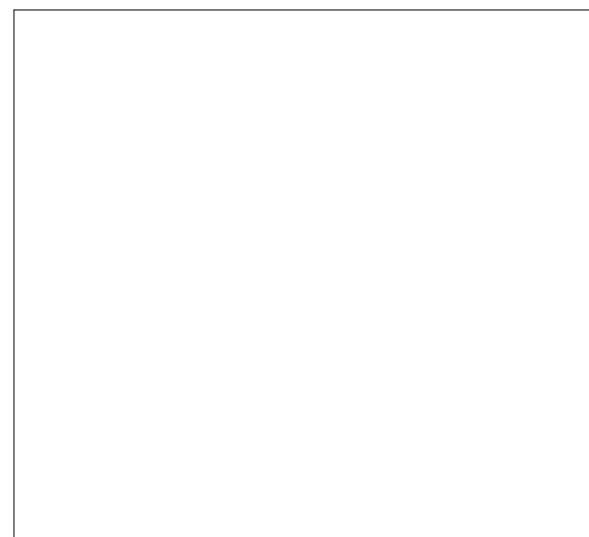
14 marks

a)

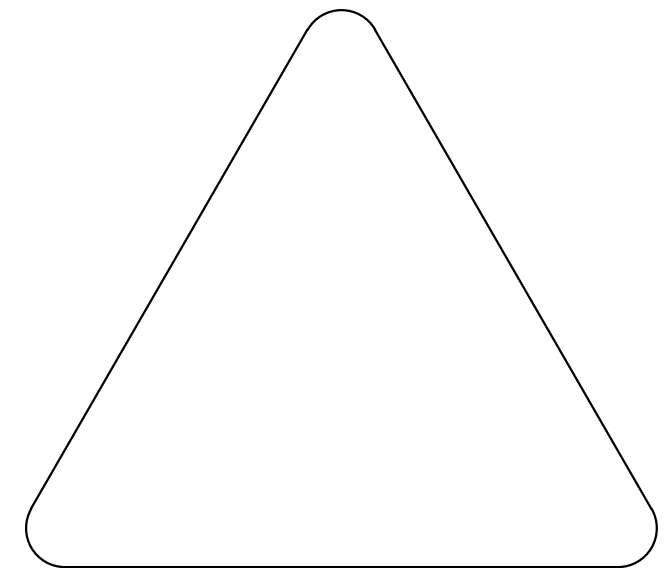


MEANING: _____

b)



FREEHAND SKETCHES



FINAL DRAWING