DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2010

Track 3

FORM 3 (3rd Year) GRAPHICAL COMMUNICATION TIME: 2 hours

Instructions

- Write your name and class on all sheets.
- Attempt ALL questions.
- All answers are to be drawn accurately, with instruments, unless otherwise stated.
- All construction lines MUST be left on each solution to show the method employed.
- Drawing aids may be used.

Information

- All dimensions are in millimetres.
- Estimate any missing dimensions not given.
- Marks will be awarded for accuracy, clarity and appropriateness of construction.

NAME _____ CLASS _____

Question	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
Max. mark	**30**	**16**	**14**	**12**	**14**	**14**	**100**

Question 1. An Isometric View and an End Elevation of a DESK ORGANIZER are given. In the space provided and where indicated draw:

a) the Front Elevation

b) the Plan

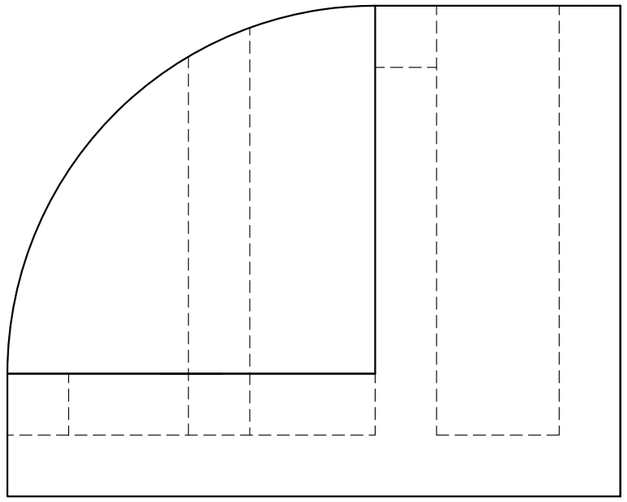
c) the Symbol of the projection used

d) the scale used

Notes:

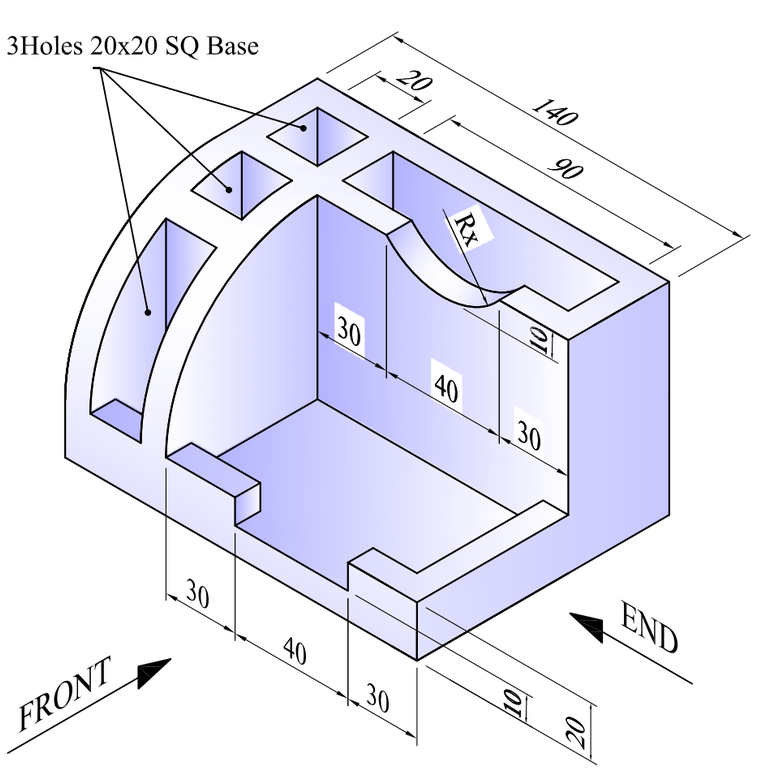
- *Material thickness is **10mm** throughout.*
- *The radius Rx is to be found using the three-point circle method. Chord length = 40mm and altitude = 10mm*
- *The three holes on the left have a square base side 20mm.*
- *Hidden details **are not** required.*

30 marks



End Elevation

Front Elevation



Plan

Projection Symbol

Scale : .....

Sheet 1 of 4

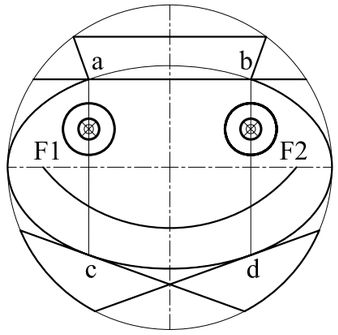
Question 2. The head of the cartoon character shown consists mainly of a part ellipse (forming the face) having a major axis of 160 mm and a minor axis of 100 mm. Using the given start lines below:

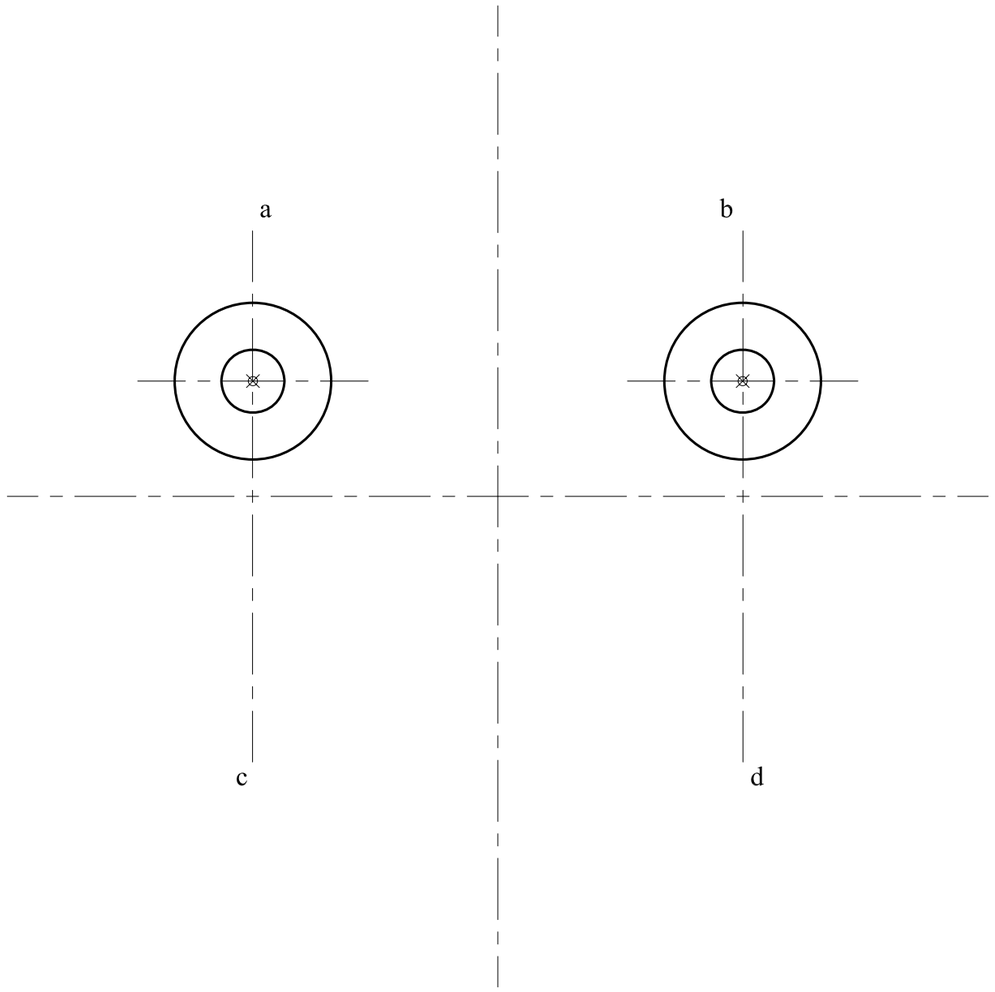
a) construct the ellipse.

b) locate the focal points and form the mouth.

c) use the centre lines of the eyes to locate the position of normals and tangents which are required to form the hat and the bow-tie.

16 marks

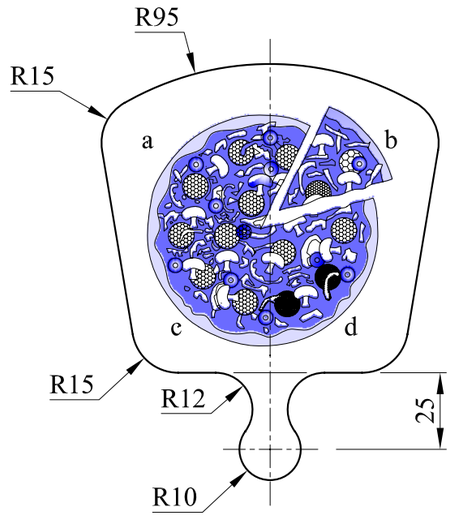


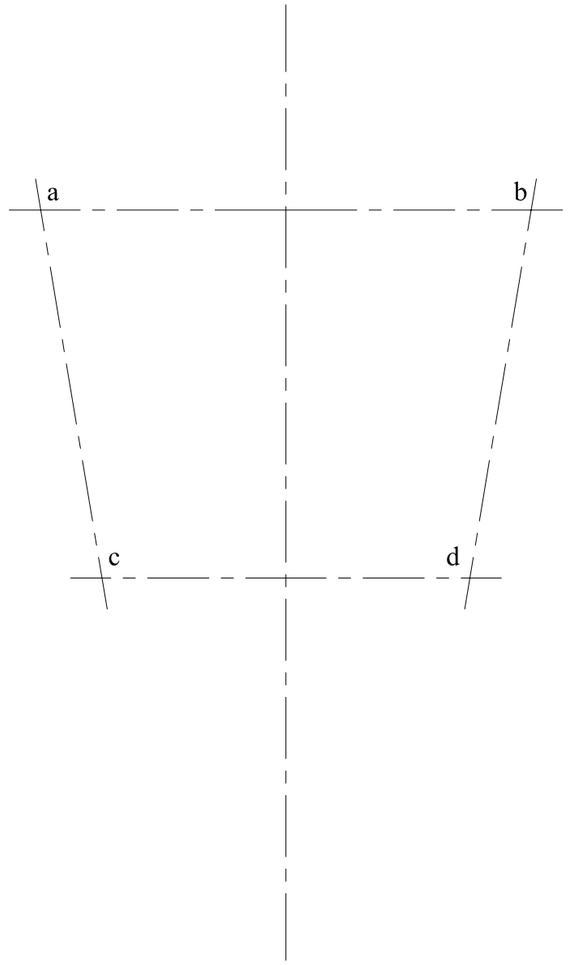


Question 3. The figure shows a wooden pizza peel which is used to handle the pizza before and after being cooked. Using the given start lines, draw the profile of the peel, showing clearly the constructions used to locate centres and points of tangencies.

Note: Centres of 15mm arcs a,b,c and d are given.

14 marks





Track 3 _ FORM 3 (3rd Year) _ 2010
GRAPHICAL COMMUNICATION

Educational Assessment Unit

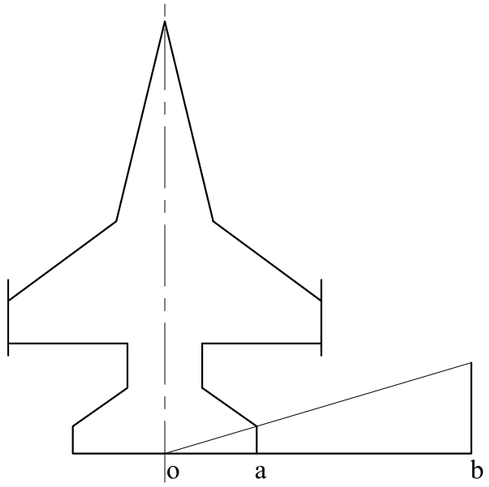
Name:

Class:

Question 4. Using the radial line method, enlarge the Jet plane profile given below such that side **oa** increases to **ob**.

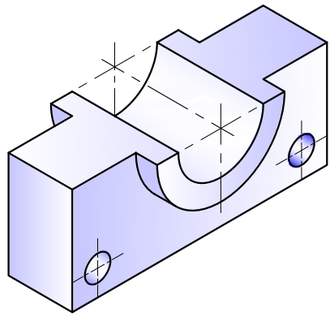
*Note: Use **'o'** as the pole.*

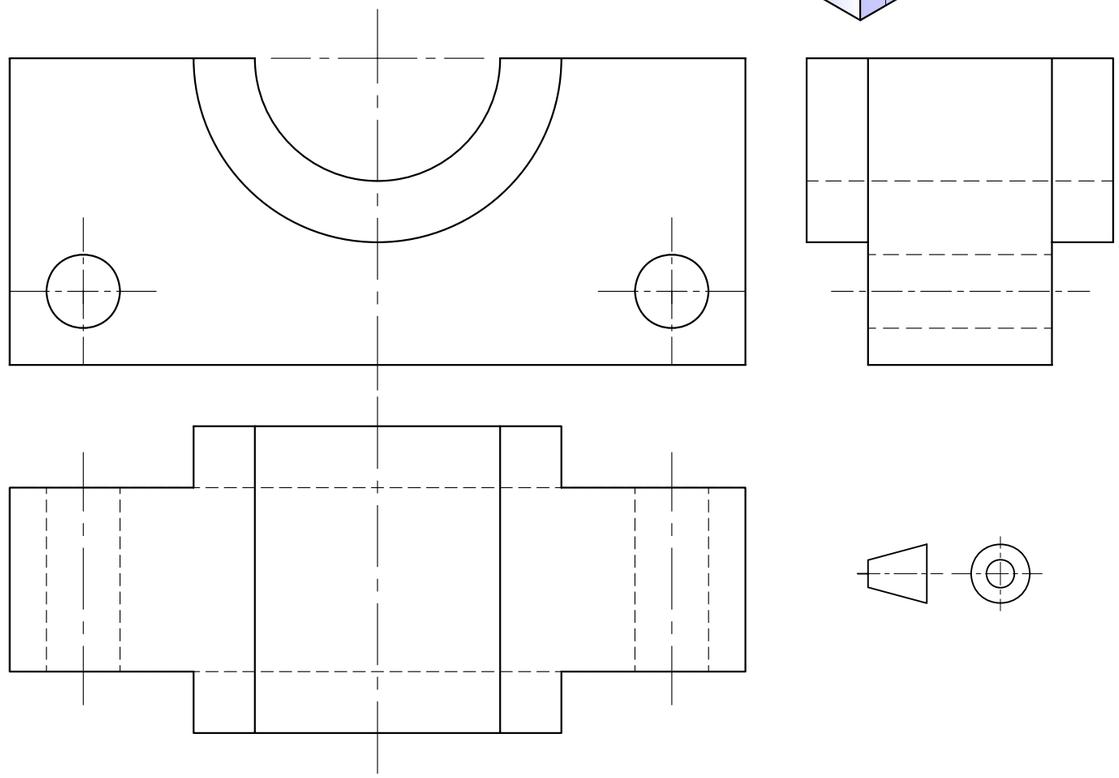
12 marks



Question 5. An isometric view and a full size orthographic projection of a bracket are given. In the space provided below and on the given start lines, draw a cabinet oblique view of the object.

14 marks





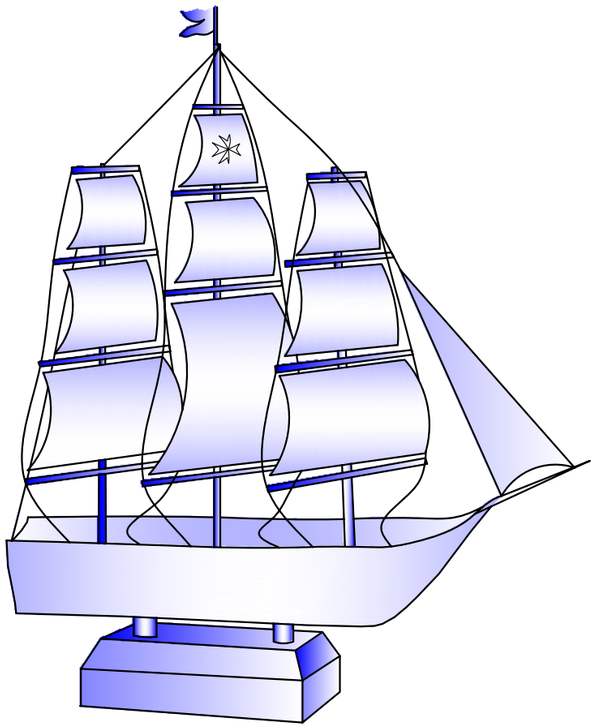
Question 6. A thin sheet copper model of a sailing ship is shown below. The curved sails are cut from copper cylinders of different diameters.

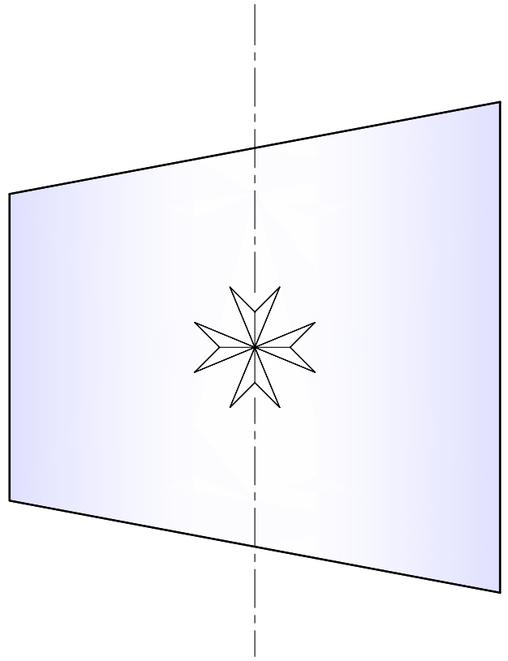
The front elevation and the plan of the rotated top sail, which consists of a cut half cylinder, are given. In the space provided, project the surface development of the sail.

14 marks

TOP SAIL

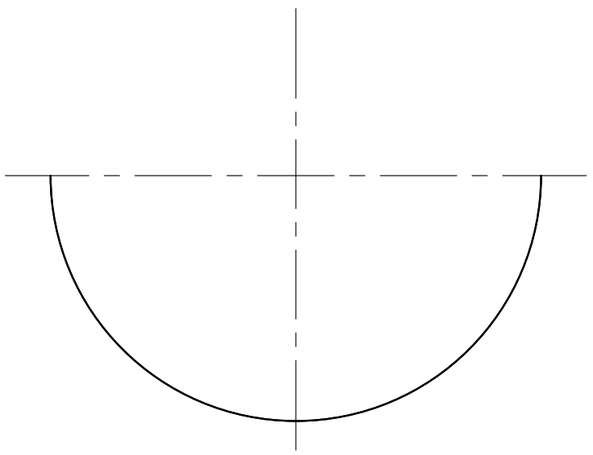
TOP SAIL ROTATED





FRONT ELEVATION

SURFACE DEVELOPMENT OF SAIL



PLAN OF HALF CYLINDER