

SHEET 1

PENANG SANGAM HIGH SCHOOL

P. O. BOX 44, RAKIRAKI

LESSON NOTES - 9

SCHOOL: PENANG SANGAM HIGH

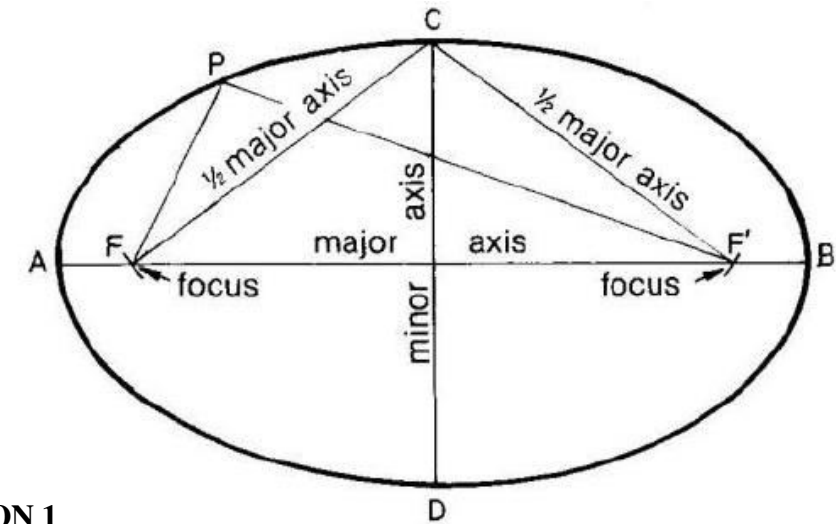
SUBJECT: BASIC TECHNOLOGY

YEAR/ LEVEL: 9A,B,C,D

Strand	BT9.2: GEOMETRY
Sub - Strand	BT9.2.2 GEOMETRICAL CONSTRUCTIONS
Content Learning Outcome	BT9.2.2.2 Identify and develop skills in geometrical construction methods utilized in making ellipse.

ELLIPSE

- An ellipse is a closed symmetrical curve with a changing diameter which varies between the major axis and the minor axis.
- An ellipse may be defined geometrically as the curve traced out by a point (P) which moves so that the sum of its distances from two fixed points (F and F') is constant and equal to the major axis.
- In the diagram shown on the right AB is the major axis; CD is the minor axis and F, F' are the focal points.
- To find the focal points, take half the major axis either from C or D then strike an arc to cut either side of the major axis.
- An ellipse is also the true shape formed by an inclined cutting plane passing through both the sides of a cone or a cylinder.

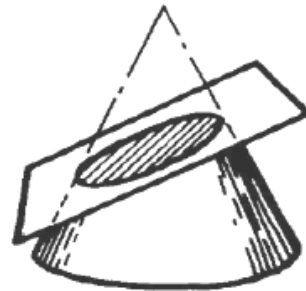


CONSTRUCTION OF ELLIPSE

Method 1: CONCENTRIC CIRCLES METHOD.

Given the major axis AB and the minor axis CD.

1. Draw a circle from the centre „O“ using the radius OA of the major axis.
2. Draw a circle from the centre „O“ using the radius OB of the minor axis.
3. Divide the circles into 12 equal parts.
4. From the 8 points of the larger circle, draw lines perpendicular to the major axis AB inwards.
5. From the 8 points of the smaller circle, draw lines perpendicular to the minor axis CD outwards.



QUESTION 1

Given: Major axis AB and Minor axis CD

Required: Construct an ellipse using the concentric circles method

