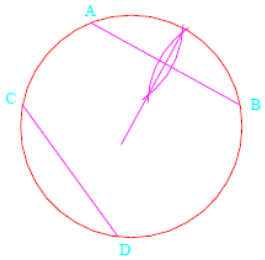
SANGAM SKM COLLEGE - NADI
LESSON NOTES – WEEK 1
YEAR 11
TECHNICAL DRAWING

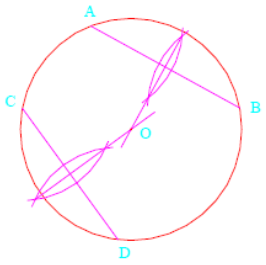
Strand	TD11.1: GEOMETRY
Sub-Strand	TD11.1.2 Centroids
Learning Outcome	a) Define centroid and state its significance. b) Construct centroid of simple geometrical shapes. c) Apply the use of centroid in original articles.

Centroids are the Centre of an object or the Centre of gravity. It is the point of intersection of all the medians. The Centre of mass of a uniform object is also called a centroid.

How to find the Centre of a circle?

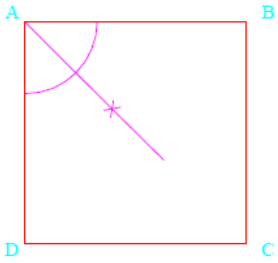
Draw two chords and bisect it. The intersection of the two bisectors is the centroid of the circle.

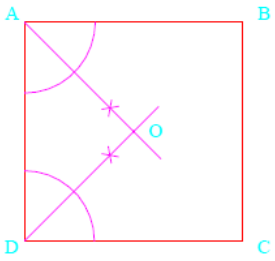




How to find the Centre of a square?

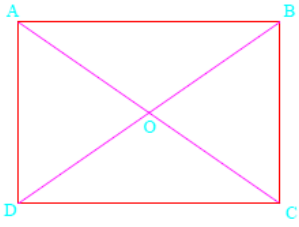
Either bisect any two angles or join the diagonals to find the centroid of the square.

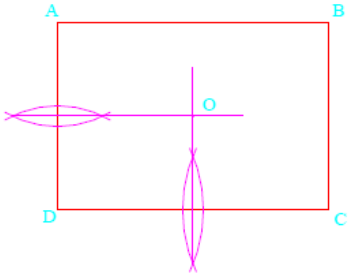




How to find the Centre of a rectangle?

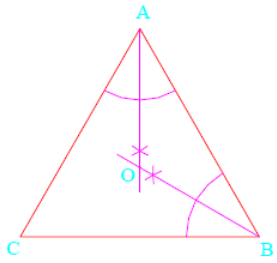
Either join the diagonals or bisect two adjacent sides to find the centroid of the rectangle.

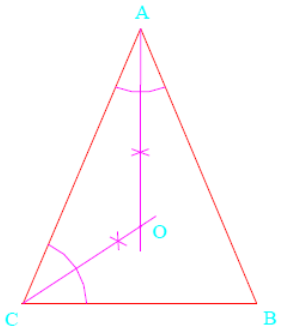




How to find the Centre of a triangle?

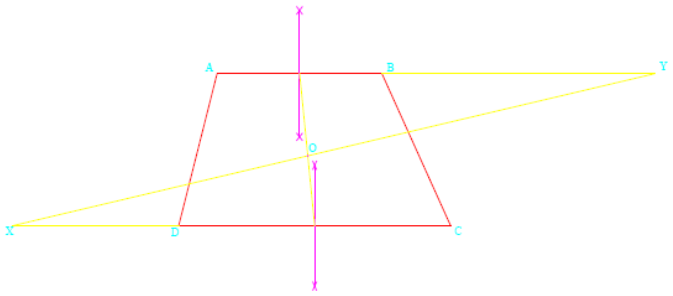
Bisect any two angles of the triangle to find its centroid.





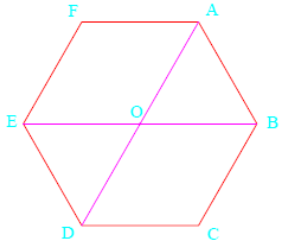
How to find the Centre of a trapezium?

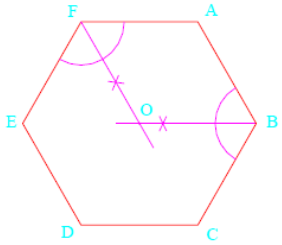
1. Bisect the two parallel sides (AB & CD) and join the midpoints.
2. Extend the parallel sides. Add the length of the opposite side as shown, (AB = XD & CD = BY).
3. Join X and Y which will intersect the line joining the midpoints for the centroid, O.



How to find the Centre of a hexagon?

Either join the diagonals or bisect two angles to find the centroid of a hexagon.

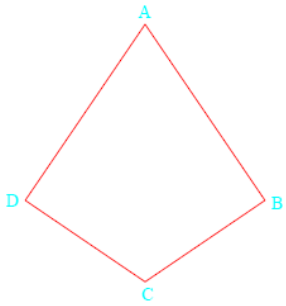


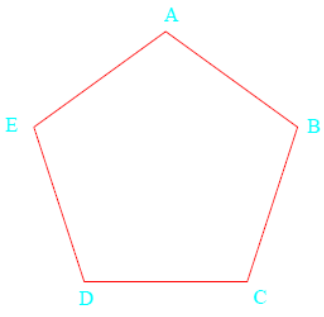


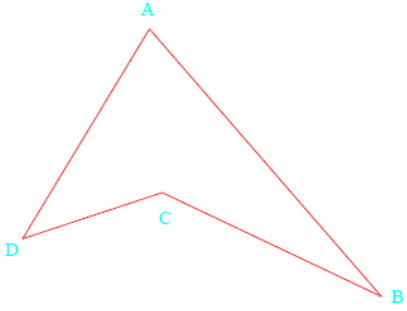
EXERCISE

Redraw and find the centroid of the following shapes?

(Answer sheet number 20 from the year 11 technical drawing student workbook.)







Note: if you cannot print and paste the notes you can write in your note book. Answer all exercises in your year 11 workbook.