

Pre-Content/content Post-Content	Learning outcomes/Objectives	
	General	Specific
<u>Pre-Content</u> To plot different points on a graph	Students will be able to plot points on a graph	Students will be able to plot and locate various points on a graph and join them to make different shapes
<u>Content</u> Distance formula	find distance between two points on a Cartesian plane	apply the formula to calculate the distance between two points on a plane.
Section formula	find the ratio in which a line is divided.	apply the formula and calculate the ratio in which a line is divided by the point lying on it
Area of a triangle	calculate area of a triangle	calculate area of a triangle whose vertices are given using the formula
<u>Post-content</u> To work out extra practice questions	to apply the knowledge learnt related to the coordinate geometry	apply the concept learnt to solve various problems and acquire <u>Problem solving</u> skills based on the given formulae and conditions.

Home Work /Assignments

NCERT exercise/solved examples given as home task.

Questions from sample papers to solve.

Selected questions from NCERT Exemplar.

Teacher's Activity	Student's Activity	Teacher's observation and Remedial
Teacher will ask them to plot different points and write the coordinates explain the concept and ask them to find distance between two points on a graph. explain the concept and ask them to solve problems given in the exercise explain the concept and conduct an activity related to it (Annexure 7) give them extra similar questions to solve	Students will plot the points as per their previous knowledge and write coordinates and also join them to make different shapes calculate the distance between two points on a plane using the formula apply the concept learnt and solve various problems given in the exercise calculate the area of triangle as per the information given and perform the activity (Annexure 7) use the concepts and formulae learnt to solve different problems	Teacher will write his/her observations after the completion of the topic.

Teaching Aids: Smart board, Text book, Graph paper, Worksheets, Internet

Methodology/Innovative Methods: Digital Technology, Lecturing, Note giving, Questioning, Discussion, Experimentation

Interdisciplinary Links: Physics

HOD

Coordinator

Vice Principal

Principal

ACTIVITY NO - 7

Subject	Mathematics
Class	X
Chapter/Unit	Co-ordinate Geometry
Topic	Area of a Triangle
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning Outcome)?

Calculating the area of triangle when the co-ordinates of the vertices of a triangle are given.

Skills: Applying, Analyzing and Creating

What I have to do?

To calculate the area of triangle when the co-ordinates of the vertices of a triangle are given.

What do I require?

Graph sheet, geometry box

What do I need to know?

Plotting of points on a Cartesian plane, Area of Trapezium.

➤ **Teacher's Activity**

Teacher will revise the concept of plotting of points on the Cartesian plane and Area of Trapezium with the students.

How will I proceed?➤ **Student's Activity**

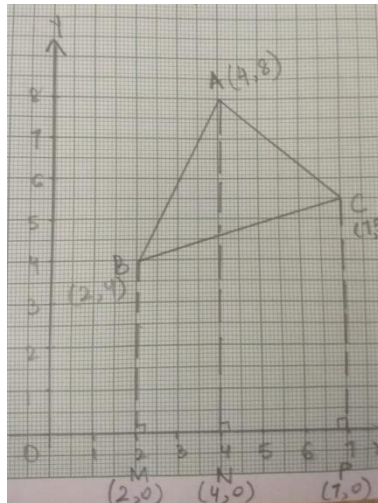
- 1) Draw the Cartesian plane and plot the co-ordinates of $\triangle ABC$.
- 2) Draw the perpendiculars AN, BM and CP from the three vertices to the X-axis .
- 3) Calculate the length of the perpendiculars AN, BM and CP.
- 4) Apply the formula of area of Trapezium to find the area of trapezia ABMN, ACPN and BCPM.

What have I observed?

- 1) Area of trapezium ABMN = $\frac{1}{2} \times 2(4 + 8) = 12 \text{ sq. units}$.
- 2) Area of trapezium ACPN = _____
- 3) Area of trapezium BCPM = _____
- 4) Area of $\triangle ABC$ = Area of trapezium ABMN + Area of trapezium ACPN – Area of trapezium BCPM

$$= \text{_____} + \text{_____} - \text{_____}$$

$$= \text{_____} \text{ sq. units}$$

**What have I learnt?**

Area of ΔABC = _____ sq. units found out geometrically.

What am I curious to learn?

Calculate the area of Δ formed by joining the points P(6,7), Q(3,4) and R(1,2).

Let me evaluate myself

- 1) Find the area of the triangle formed by the points A(a,0), B(0,0) and C(0,b).

- 2) A(6,1), B(8,2) and C(9,4) are the three vertices of the parallelogram ABCD. If E is the mid-point of DC, find the area of ΔADE .

- 1) Let A(6,0), B(5,-2) and C(-2,-1) be the vertices of a ΔABC . Find the centroid P of the triangle ABC. Also find $\frac{\text{area of } \Delta BPC}{\text{area of } \Delta BAC}$.

