

LESSON PLAN

(PERIOD -2WISE)

SUBJECT: MATHEMATICS

GRADE: IX

Chapter Number and Title of Chapter	COORDINATE GEOMETRY
Period Number	2 (approx. 40 min each)
Learning Objectives	This Chapter will enable the learner to 1. Locate the position of points in I , II , III and IV quadrant. 2. apply the sign convention and 3. plot the points in the coordinate plane.
Teaching Aids / Resources	1) Videos (Teaching and Explanation) 2) PPT related to the coordinate geometry and its concepts. 3) Concept Map of concepts used in this chapter 4) Additional Resources : NCERT BOOK AND NCERT EXAMPLER
Previous Knowledge/ Curiosity Questions	This lesson requires 1. What are the coordinates of the origin O?  2. What are the coordinates of a point on the x-axis? 3. What are the coordinates of a point on the y-axis?
Announcement of topic	Now today we will discuss application of coordinate geometry.
Teaching Methodology/ Strategy	Transaction would proceed in the following manner- Suggestive Methodologies: Brain Storming / Curiosity Questioning: The class would start with a discussion on what the students

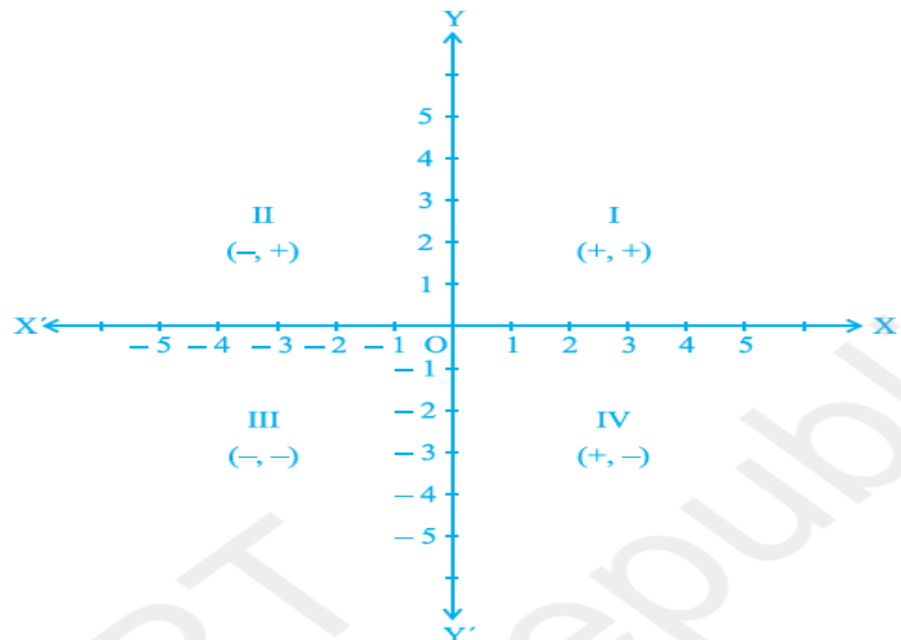
	have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the coordinate geometry in our daily life that they would be studying. Active learning- Students will try to understand the concept of coordinate geometry along with some example Group learning- Students will give the real life examples of coordinate geometry where we can use in daily life after discussing with peer group. Questioning- <i>Guided practice followed by Independent Practice-</i> NCERT questions to be discussed in the classroom.
Content Obligatory Vocabulary (Keywords)	Sign of coordinate, Abscissa, Ordinate
Learning Concepts/ Teaching Points	•Discuss the problems based on identifying the coordinates of the points and plotting the points. •Discuss some examples where coordinate geometry is used. •The position of the point (x, y) in the Cartesian plane is same as the position of (y, x). Fact: Case I: If $x \neq y$, then the position of (x, y) in the Cartesian plane is different from the position of (y, x). Case II: If $x = y$, then the position of (x, y) in the Cartesian plane is same as the position of (y, x).

Hard Spots/ Focus Spots	concept of abscissa and ordinate Why: Students struggle in comprehending the concept of abscissa and ordinate as they get confused among the different concept of the coordinate geometry. RESULT: Students will face difficulty in differentiating the concept of abscissa and ordinate.

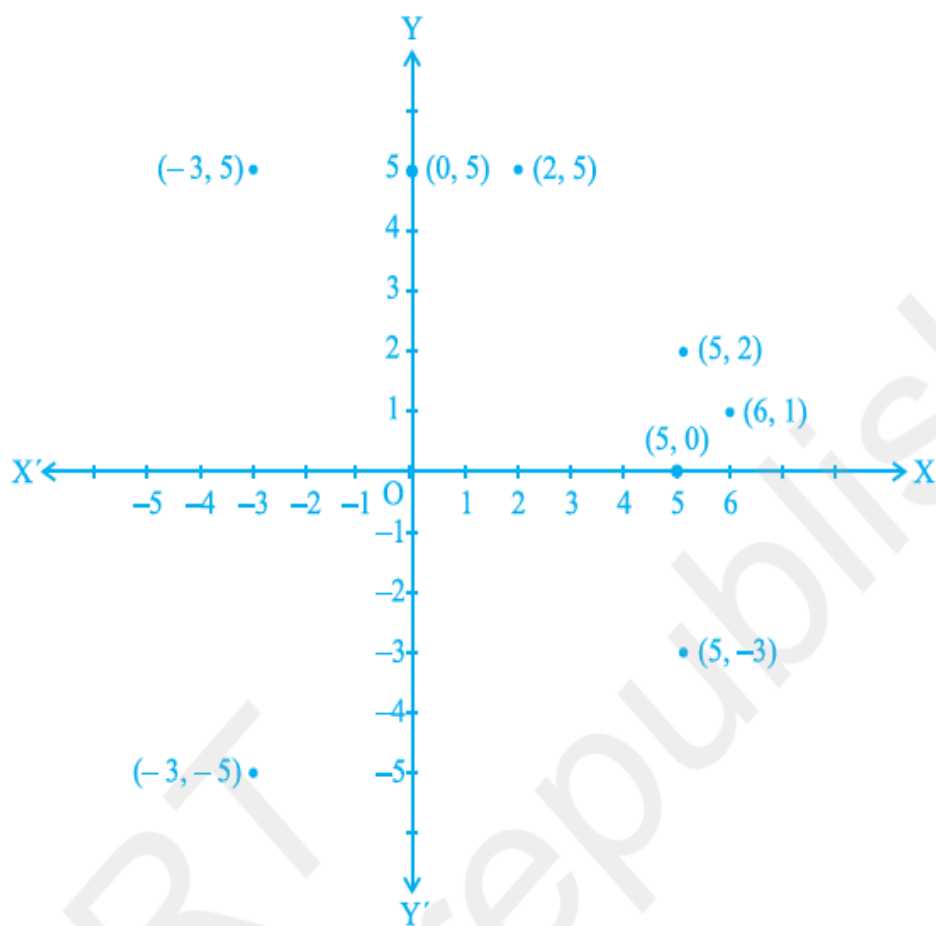
Experiential Content

the signs of the coordinates of a point and the quadrant of a point in which it lies.

- (i) If a point is in the 1st quadrant, then the point will be in the form $(+, +)$, since the 1st quadrant is enclosed by the positive x - axis and the positive y - axis.
- (ii) If a point is in the 2nd quadrant, then the point will be in the form $(-, +)$, since the 2nd quadrant is enclosed by the negative x - axis and the positive y - axis.
- (iii) If a point is in the 3rd quadrant, then the point will be in the form $(-, -)$, since the 3rd quadrant is enclosed by the negative x - axis and the negative y - axis.
- (iv) If a point is in the 4th quadrant, then the point will be in the form $(+, -)$, since the 4th quadrant is enclosed by the positive x - axis and the negative y - axis.



Example 3 : Locate the points $(5, 0)$, $(0, 5)$, $(2, 5)$, $(5, 2)$, $(-3, 5)$, $(-3, -5)$, $(5, -3)$ and $(6, 1)$ in the Cartesian plane.



Recapitulation :

Example 4 : Plot the following ordered pairs (x, y) of numbers as points in the Cartesian plane. Use the scale $1\text{cm} = 1$ unit on the axes.

x	-3	0	-1	4	2
y	7	-3.5	-3	4	-3

Assignment:

EXERCISE 3.3

1. In which quadrant or on which axis do each of the points $(-2, 4)$, $(3, -1)$, $(-1, 0)$, $(1, 2)$ and $(-3, -5)$ lie? Verify your answer by locating them on the Cartesian plane.
2. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes.

x	-2	-1	0	1	3
y	8	7	-1.25	3	-1

