

□ 1. Introduction:

Coordinate Geometry (also called Cartesian Geometry) is the study of geometry using the coordinate plane. It connects algebra and geometry by plotting algebraic equations on graphs.

□ 2. Cartesian System:

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A Cartesian plane is formed by two number lines:

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The X-axis (horizontal)

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The Y-axis (vertical)

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The point where they intersect is called the Origin (0, 0).

□ 3. Coordinates of a Point:

- A point is represented as an ordered pair (x, y):
 - xxx: distance from the Y-axis (horizontal)
 - yyy: distance from the X-axis (vertical)
 - The x-value is called the abscissa, and the y-value is the ordinate.
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□ 4. The Four Quadrants:

Quadrant	x-value	y-value	Example
I	+	+	(3, 2)
II	-	+	(-4, 5)
III	-	-	(-2, -6)
IV	+	-	(7, -1)

□ 5. Important Terms:

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Origin: The point (0, 0)

- Abscissa: The x-coordinate
 - Ordinate: The y-coordinate
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□ 6. Plotting Points on Graph:

□ Steps to Plot a Point (x, y):

1.
Start at the origin (0, 0)
2.
Move x units horizontally: Right if +, Left if -
3.
Move y units vertically: Up if +, Down if -

4.

Mark the point and label it

□ 7. Real-Life Uses of Coordinate Geometry:

- Maps and navigation (Google Maps)
 - Game design and animation
 - Tracking and GPS systems
 - Engineering and architecture
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□ 8. Exam Tips:

- Memorize the signs of coordinates in all four quadrants
 - Practice plotting points on graph paper
 - Understand the terminology: axis, origin, abscissa, ordinate
 - Practice NCERT exercises with proper diagrams
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□ 9. Common Questions in Exams:

- Plot and label given points

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Identify the quadrant of points like $(-2, 3)$, $(4, -1)$, etc.

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Define terms like origin, abscissa, ordinate

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Fill in blanks or true/false based on coordinate knowledge