

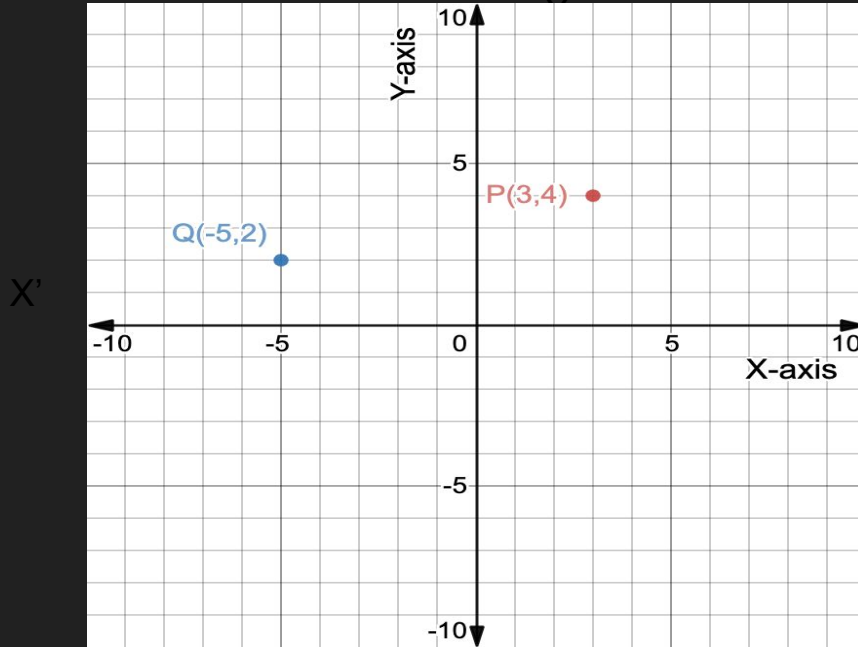


**IIT Madras**  
ONLINE DEGREE

# Elements of Coordinate Geometry

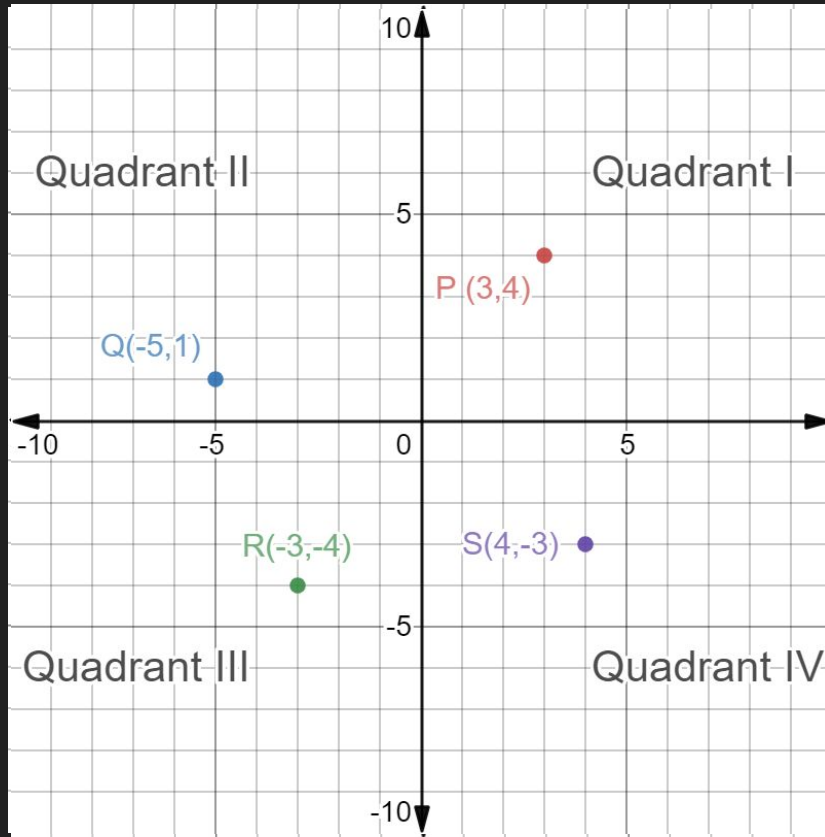
Axes, Points and Lines

# Rectangular Coordinate System



Coordinate Plane

- The horizontal line is called X-axis.
- The Vertical line is called Y-axis.
- The point of intersection of these two lines is called origin.
- Any point on the coordinate plane can be represented by an ordered pair  $(x,y)$ .
- For example,  $P=(3,4)$ ,  $Q=(-5,2)$ .



The coordinate axes split the coordinate plane into **four quadrants and two axes**.

- Quadrant I: (+,+)
- Quadrant II: (-,+)
- Quadrant III: (-,-)
- Quadrant IV: (+,-)
- X-axis: ( $\pm$ , 0)
- Y-axis: (0,  $\pm$ )
- Origin (0,0)

Quadrants in the coordinate system