

Name _____ Date _____

The Coordinate System (pages 459–461)

A **coordinate system** consists of a horizontal line (called the **x-axis**) and a vertical line (called the **y-axis**) that intersect at the **origin**.

- The x-axis and the y-axis divide the plane into four **quadrants**.
- You can name point *P* with an **ordered pair** of numbers. The order makes a difference. The pair (1,3) is not the same as (3,1).
- The first number in the pair tells you how far to move to the right or left of the origin. It is called the **x-coordinate**.
- The second number in the pair tells you how far to move up or down from the x-axis. It is called the **y-coordinate**.

EXAMPLES

A Give the ordered pair for the point which is 2 units to the right of the origin and 3 units down.
Show movements to the right and up with positive integers and movements to the left and down with negative integers. This ordered pair is (2, -3).

B What is the ordered pair for the point 4 units to the left of the origin and 5 units up?
Since you move to the left, the x-coordinate is negative. This ordered pair is (-4, 5).

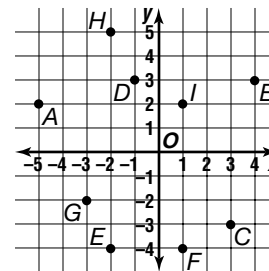
Try These Together

1. What are the coordinates of the origin?
HINT: How much will you move from zero?
2. What is true of all points in Quadrant III?
HINT: Which ways do you move from the origin to get to a point in Quadrant III?

PRACTICE

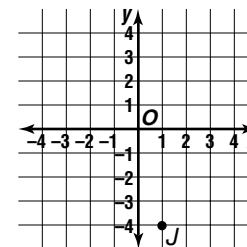
Name the ordered pair for each point.

- | | | |
|-------------|--------------|--------------|
| 3. <i>D</i> | 4. <i>A</i> | 5. <i>I</i> |
| 6. <i>C</i> | 7. <i>G</i> | 8. <i>H</i> |
| 9. <i>B</i> | 10. <i>F</i> | 11. <i>E</i> |



12. Standardized Test Practice In which quadrant is Point *J* located?

- | | |
|-----------------------|----------------------|
| A Quadrant I | B Quadrant II |
| C Quadrant III | D Quadrant IV |



Answers: 1. (0, 0) 2. Both the coordinates are negative. 3. (-1, 3) 4. (-5, 2) 5. (1, 2) 6. (3, -3) 7. (-3, -2) 8. (-2, 5) 9. (4, 3) 10. (1, -4) 11. (-2, -4) 12. D