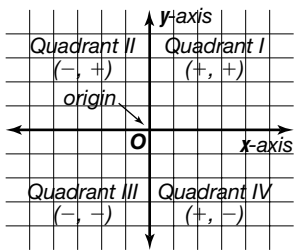


The Coordinate Plane (Pages 58–63)

In mathematics, you can locate a point on a **coordinate system**.

<p>The Coordinate Plane</p> 	<p>The coordinate system is formed by the intersection of two number lines. The vertical number line, called the y-axis, and the horizontal number line, called the x-axis, intersect at their zero points, a point called the origin. The plane that contains both axes is called the coordinate plane. The axes divide the plane into four quadrants, numbered as shown. An ordered pair, such as (2, 3), is used to locate a point. The first number is the x-coordinate and corresponds to numbers on the x-axis. The second is the y-coordinate and corresponds to numbers on the y-axis.</p>
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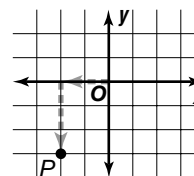
EXAMPLE

Graph the point $P(-2, -3)$. Name the quadrant in which the point is located.

Move from the origin 2 units to the left, since the x-coordinate is negative.

Then move 3 units down, since the y-coordinate is negative.

Since the x- and y-coordinates are both negative, point P is in Quadrant III.



Try This Together

Use the graph in PRACTICE below.

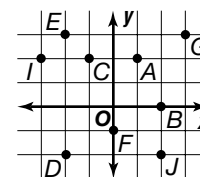
- Write the ordered pair that names point A.

HINT: Write your ordered pair in the form (x, y).

PRACTICE

Write the ordered pair for each point.

- | | | | |
|------|------|------|------|
| 2. C | 3. D | 4. E | 5. F |
| 6. G | 7. B | 8. I | 9. J |



Graph each point.

- | | | | | |
|---------------|----------------|----------------|---------------|-----------------|
| 10. $M(3, 1)$ | 11. $P(2, -3)$ | 12. $T(-4, 2)$ | 13. $N(0, 4)$ | 14. $G(-5, -3)$ |
|---------------|----------------|----------------|---------------|-----------------|

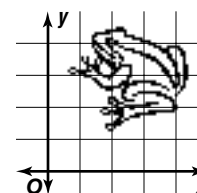
Name the quadrant in which each point is located.

- | | | | | |
|---------------|---------------|--------------|---------------|----------------|
| 15. $(-3, 3)$ | 16. $(5, -2)$ | 17. $(3, 4)$ | 18. $(0, -1)$ | 19. $(-4, -4)$ |
|---------------|---------------|--------------|---------------|----------------|



- Standardized Test Practice** Which of the following gives the coordinates of the point where the frog's eye is located?

- | | |
|----------|----------|
| A (1, 4) | B (2, 4) |
| C (4, 1) | D (4, 2) |



Answers: 1. (1, 2) 2. (-1, 2) 3. (-2, -2) 4. (-2, 3) 5. (0, -1) 6. (3, 3) 7. (2, 0) 8. (-3, 2) 9. (2, -2) 10-14. See Answer Key. 15. II 16. IV 17. I 18. none 19. III 20. B