

2-3 Study Guide and Intervention

The Coordinate Plane

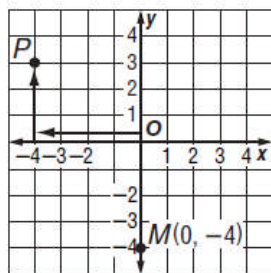
The **coordinate plane** is used to locate points. The horizontal number line is the **x-axis**. The vertical number line is the **y-axis**. Their intersection is the **origin**.

Points are located using **ordered pairs**. The first number in an ordered pair is the **x-coordinate**; the second number is the **y-coordinate**.

The coordinate plane is separated into four sections called **quadrants**.

Example 1 Name the ordered pair for point P. Then identify the quadrant in which P lies.

- Start at the origin.
 - Move 4 units left along the x-axis.
 - Move 3 units up on the y-axis.
- The ordered pair for point P is $(-4, 3)$.
P is in the upper left quadrant or quadrant II.



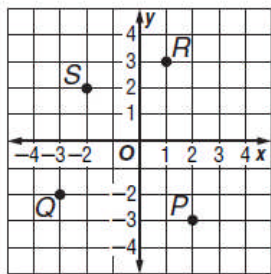
Example 2 Graph and label the point $M(0, -4)$.

- Start at the origin.
- Move 0 units along the x-axis.
- Move 4 units down on the y-axis.
- Draw a dot and label it $M(0, -4)$.

Exercises

Name the ordered pair for each point graphed at the right. Then identify the quadrant in which each point lies.

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|---------------------|-----------------------|
| 1. P $(2, -3)$, IV | 2. Q $(-3, -2)$, III |
| 3. R $(1, 3)$, I | 4. S $(-2, 2)$, II |



Graph and label each point on the coordinate plane.

- | | |
|----------------|-----------------|
| 5. A $(-1, 1)$ | 6. B $(0, -3)$ |
| 7. C $(3, 2)$ | 8. D $(-3, -1)$ |
| 9. E $(1, -2)$ | 10. F $(1, 3)$ |

