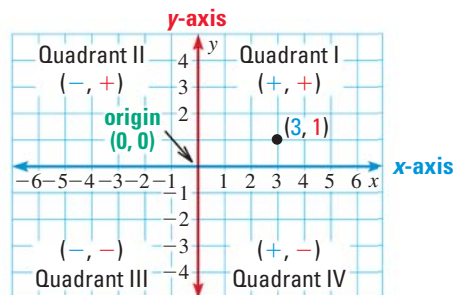


# The Coordinate Plane 8.7.D

A **coordinate plane** is formed by the intersection of a horizontal number line called the **x-axis** and a vertical number line called the **y-axis**. The axes meet at a point called the **origin** and divide the coordinate plane into four **quadrants**, numbered I, II, III, and IV.

Each point in a coordinate plane is represented by an **ordered pair**. The first number is the **x-coordinate**, and the second number is the **y-coordinate**.

The ordered pair  $(3, 1)$  is graphed at the right. The x-coordinate is 3, and the y-coordinate is 1. So, the point is right 3 units and up 1 unit from the origin.

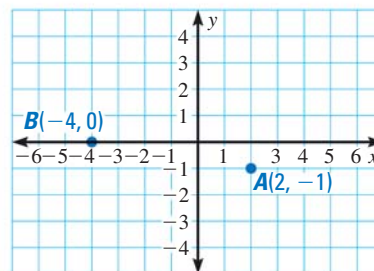


## EXAMPLE

Graph the points  $A(2, -1)$  and  $B(-4, 0)$  in a coordinate plane.

**$A(2, -1)$**  Start at the origin.  
The x-coordinate is 2, so move right 2 units.  
The y-coordinate is  $-1$ , so move down 1 unit.  
Draw a point at  $(2, -1)$  and label it A.

**$B(-4, 0)$**  Start at the origin.  
The x-coordinate is  $-4$ , so move left 4 units.  
The y-coordinate is 0, so move up 0 units.  
Draw a point at  $(-4, 0)$  and label it B.



## PRACTICE

Graph the points in a coordinate plane.

- |                 |                |                 |                |                |
|-----------------|----------------|-----------------|----------------|----------------|
| 1. $A(7, 2)$    | 2. $B(6, -7)$  | 3. $C(2, -3)$   | 4. $D(-8, 0)$  | 5. $E(-4, -8)$ |
| 6. $F(1, 3)$    | 7. $G(3, 0)$   | 8. $H(1, -5)$   | 9. $I(0, -2)$  | 10. $J(-6, 5)$ |
| 11. $K(5, 8)$   | 12. $L(8, -2)$ | 13. $M(-3, -4)$ | 14. $N(-7, 8)$ | 15. $P(-5, 1)$ |
| 16. $Q(-2, -6)$ | 17. $R(0, 6)$  | 18. $S(-4, -1)$ | 19. $T(4, 4)$  | 20. $V(-3, 7)$ |

Give the coordinates and the quadrant or axis of the point.

- |       |       |       |
|-------|-------|-------|
| 21. A | 22. B | 23. C |
| 24. D | 25. E | 26. F |
| 27. G | 28. H | 29. J |
| 30. K | 31. L | 32. M |
| 33. N | 34. O | 35. P |
| 36. Q | 37. R | 38. S |
| 39. T | 40. U | 41. V |
| 42. W | 43. X | 44. Y |

