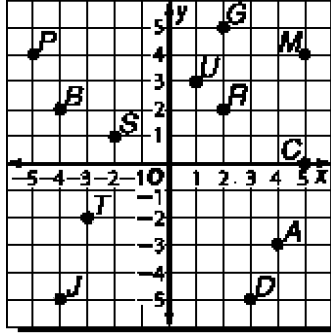


11-7 The Coordinate Plane - Practice and Problem Solving

Use the coordinate plane at the right. Identify the point for each ordered pair.



13. $(1, 3)$

Start at the origin. Move right 1 and up 3. The point at $(1, 3)$ is U .

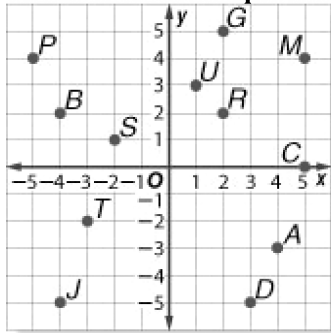
15. $(-2, 1)$

Start at the origin. Move left 2 and up 1. The point at $(-2, 1)$ is S .

17. $(-4, -5)$

Start at the origin. Move left 4 and down 5. The point at $(-4, -5)$ is J .

Write the ordered pair that names each point. Then identify the quadrant where each point is located.



19. C

Start at the origin. Move right to find the x -coordinate. Since the point is on the x -axis, the y -coordinate is 0. Point C is named by $(5, 0)$ and is not in any quadrant.

21. D

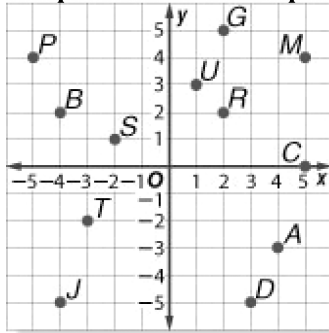
Start at the origin. Move right to find the x -coordinate and down to find the y -coordinate. Point D is named by $(3, -5)$ and is in the fourth quadrant.

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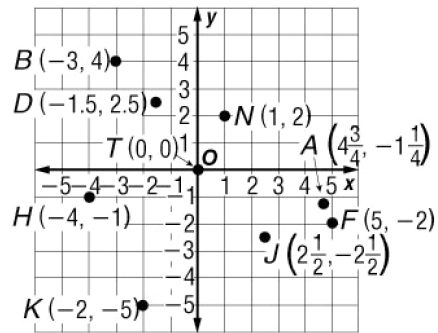
23. M

Start at the origin. Move right to find the x -coordinate and up to find the y -coordinate. Point M is named by $(5, 4)$ and is in the first quadrant.

Graph and label each point on a coordinate plane.

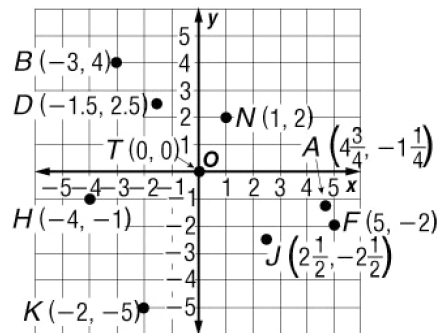


25. $T(0, 0)$



The point T is at the origin $(0, 0)$

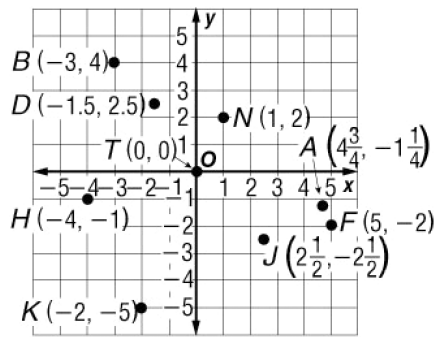
27. $F(5, -2)$



For point F , start at the origin. Move right 5 and down 2.

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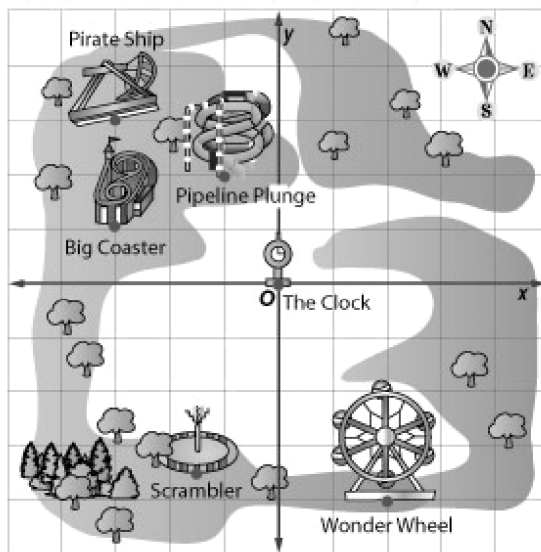
29. $K(-2, -5)$



For point K , start at the origin. Move left 2 and down 5.

PARKS Refer to the map of Wonderland Park.


Texas' Greatest Amusement Park Since 1951



31. What attraction is located at $(-3, 3)$?

Start at the origin. To reach the point $(-3, 3)$ move 3 units left, then 3 units up. The Pirate Ship is located at $(-3, 3)$.

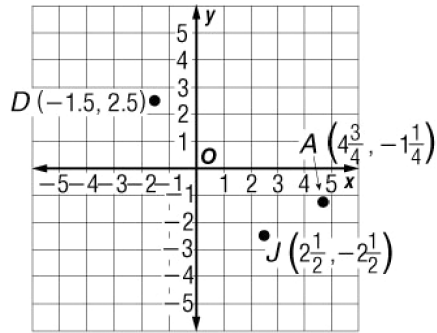
33. What is located closest to the origin?

The object closest to the origin is The Clock.

Graph and label each point on a coordinate plane.

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35. $A(4\frac{3}{4}, -1\frac{1}{4})$



For point B , start at the origin. Move right $4\frac{3}{4}$ and down $1\frac{1}{4}$.

GEOGRAPHY Refer to the map of South America shown.



37. What country is located at $(10^\circ\text{S latitude}, 60^\circ\text{W longitude})$?

Find the country located at the intersection of the 10°S latitude and 60°W longitude.
The country is Brazil.

39. What line on a coordinate plane is similar to the line labeled 0° on the map?

x -axis

CHALLENGE Without graphing, identify the quadrant(s) for which each of the following statements is true for any point (x, y) . Justify your response.

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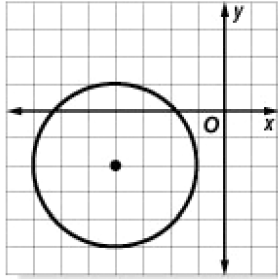
41. The product of the x - and y -coordinates is positive.

Quadrants I and III; Sample answer: For the product of two numbers to be positive, the numbers must either be both positive or both negative. In Quadrant I, both coordinates are positive and in Quadrant III, both coordinates are negative.

43. **OPEN ENDED** Give the coordinates of three points that form a straight line when connected.

Sample answer: $(-1, 2)$, $(2, 5)$, $(5, 8)$

45. Which of the following coordinates lie within the circle graphed below?



- A $(-2, 3)$
- B $(-3, -4)$
- C $(-1, 2)$
- D $(-3, 4)$

$(-3, -4)$ is inside the circle. The answer is B.

47. Find the value of $x \div y$ if $x = -15$ and $y = -3$.

$$\begin{aligned} x \div y &= -15 \div (-3) \\ &= 5 \end{aligned}$$

Add or subtract.

49. $7 + (-3)$

4

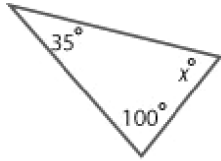
51. $-22 + (-14)$

-36

Find the value of x in each triangle.

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53.



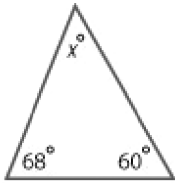
The sum of the measures of the angles of a triangle is 180.

$$x + 35 + 100 = 180$$

$$x + 135 = 180$$

$$x = 45$$

55.



The sum of the measures of the angles of a triangle is 180.

$$x + 68 + 60 = 180$$

$$x + 128 = 180$$

$$x = 52$$

PREREQUISITE SKILL Subtract.

57. $4 - 7$

$$\begin{aligned} 4 - 7 &= 4 + (-7) \\ &= -3 \end{aligned}$$

59. $-2 - 9$

$$\begin{aligned} -2 - 9 &= -2 + (-9) \\ &= -11 \end{aligned}$$