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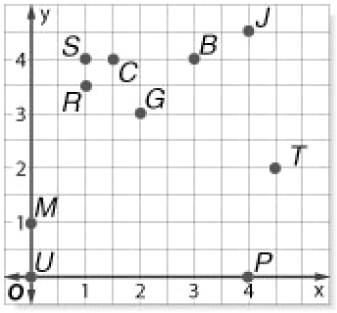
4-9 Algebra: Ordered Pairs and Functions - Practice and Problem Solving

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



11. *P*

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 *P* is named by (4, 0).

13. *B*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *B* is named by (3, 4).

15. *S*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *S* is named by (1, 4).

17. *T*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *T* is named by (4.5, 2).

19. *J*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *J* is named by (4, 4.5).

Graph and label each point on a coordinate plane.

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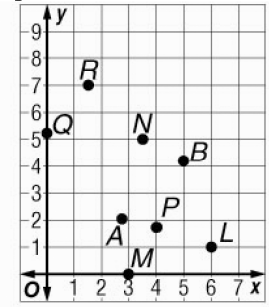
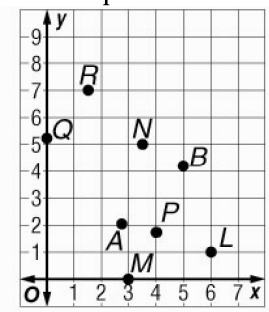
21. $L(6, 1)$

Start at the origin. The x-coordinate is 6. So, move 2 units to the right. Since the y-coordinate is 1, move 1 unit up. Draw a dot and label the point L.



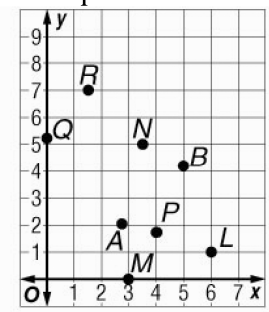
23. $N(3\frac{1}{2}, 5)$

Start at the origin. The x-coordinate is $3\frac{1}{2}$. So, move $3\frac{1}{2}$ units to the right. Since the y-coordinate is 5, move 5 units up. Draw a dot and label the point N.



25. $R(1.5, 7)$

Start at the origin. The x-coordinate is 1.5. So, move 1.5 units to the right. Since the y-coordinate is 7, move 7 units up. Draw a dot and label the point R.



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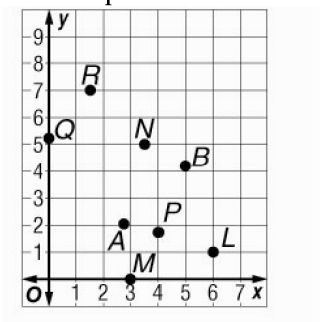
27. $A(2\frac{3}{4}, 2)$

Start at the origin. The x-coordinate is $2\frac{3}{4}$. So, move $2\frac{3}{4}$ units to the right. Since the y-coordinate is 2, move 2 units up. Draw a dot and label the point A.



MEASUREMENT Use the following information.

The table gives the amount of fencing needed to create square pens with side lengths 5, $5\frac{1}{4}$, $5\frac{1}{2}$, and $5\frac{3}{4}$ feet.

Side Length (ft)	Amount of Fencing (ft)
5	20
$5\frac{1}{4}$	21
$5\frac{1}{2}$	22
$5\frac{3}{4}$	23

29. List this information as ordered pairs (side length, amount of fencing).

$(5, 20), \left(5\frac{1}{4}, 21\right), \left(5\frac{1}{2}, 22\right), \left(5\frac{3}{4}, 23\right)$

READING Use the following information.

It took Kevin 4 minutes to read one page in his book. The table shows the total time it took him to read 0, 1, 2, and 3 pages of the book.

Number of Pages	Total Time (min)
0	0
1	4
2	8
3	12

31. List this information as ordered pairs (number of pages, total time).

(0, 0), (1, 4), (2, 8), (3, 12)

33. **MAPS** Your house is located at (4, 1), which is 4 blocks east and 1 block north of the map's center, (0, 0). If you walk two blocks east and one block north to your friend's house, what are the coordinates of your friend's house?

(4 + 2, 1 + 1) → (6, 2)

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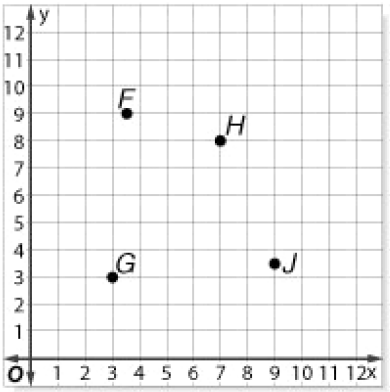
35. **OPEN ENDED** Give an example of an ordered pair that represents a point located on the *x*-axis.

Sample answer: (5, 0)

37. **WRITING IN MATH** Explain why the ordered pair (3, 2) is graphed at a different location than the ordered pair (2, 3).

Sample answer: The point (3, 2) is 3 units to the right of the origin on the *x*-axis and 2 units up the *y*-axis. The point (2, 3) is 2 units over on the *x*-axis and 3 units up the *y*-axis.

39. What point on the grid below corresponds to the coordinate pair $(9, 3\frac{1}{2})$?



F Point *F*
G Point *G*
H Point *H*
J Point *J*

Start at the origin. Move right 9 units and up $3\frac{1}{2}$ units. Point *J* corresponds to the coordinate pair $\left(9, 3\frac{1}{2}\right)$.

The correct answer is J.

Write each decimal as a fraction or mixed number in simplest form.

41. 1.34

$$1.34 = 1\frac{34}{100}$$
$$= 1\frac{17}{50} \quad \text{Divide by the GCF, 2.}$$

43. 13.008

$$13.008 = 13\frac{8}{1000}$$
$$= 13\frac{1}{125} \quad \text{Divide by the GCF, 8.}$$

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45. **BUSINESS** The manager of a shoe store wants to post a display of the number of shoes sold by each sales associate over the past 6 months. What type of statistical display would be most appropriate for this situation?

The data will compare shoes sold over a period of time, so a line graph will be best.