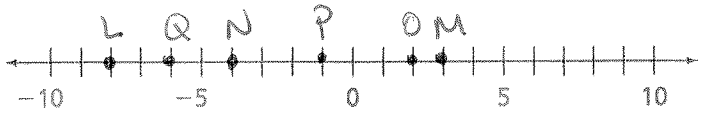
Name:

2-1 Additional Practice

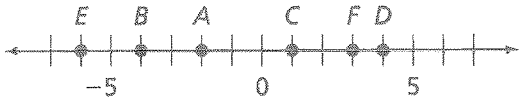
Scan for Multimedia

In 1–6, plot each point on the number line below.



1. $L(-8)$
2. $M(3)$
3. $N(-4)$
4. $O(2)$
5. $P(-1)$
6. $Q(-6)$

In 7–12, use the number line below. Write the integer value that each point represents, then write its opposite.



7. A -2
8. B -4
9. C 1
10. D 4
11. E -6
12. F 3

In 13–18, write the opposite of each integer.

13. -12 12
14. 63 -63
15. $-(-10)$ -10 (10)
16. 33 -33
17. -101 101
18. $-(-54)$ -54 (54)

In 19–24, compare the integers and write the integer with the greater value.

19. $-2, 3$ 3
20. $-4, -1$ -1
21. $0, -7$ 0
22. $-(-5), 4$ $-(-5)$ (5)
23. $-8, -(-6)$ $-(-6)$ (6)
24. $-(-3), -(-1)$ $-(-3)$ 3 1

25. A contestant in a game show has 9,000 points. The contestant answers the next question incorrectly and loses 750 points. What integer represents a loss of 750 points?

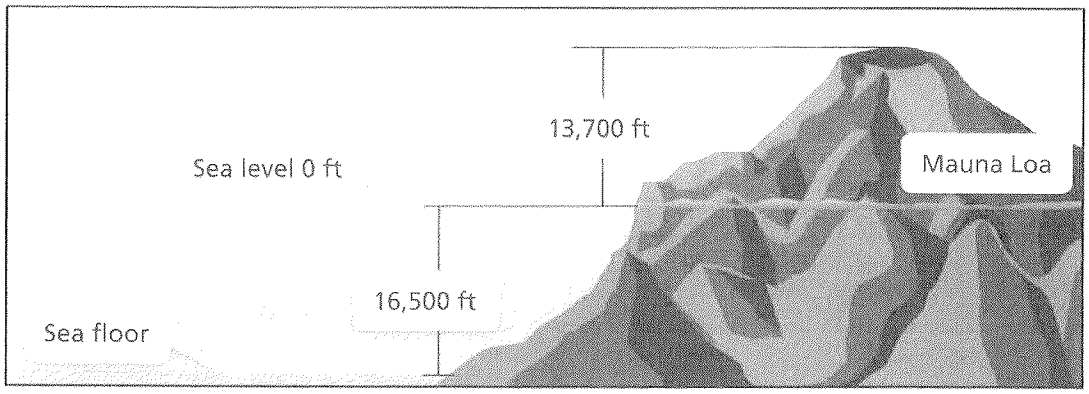
-750

26. Two people are scuba diving. One diver is 36 feet below the surface. The other diver is 44 feet below the surface. What integers represent where the divers are with respect to the surface? Which diver is deeper?

$-36, -44$

-44 (DEEPER)

Mauna Loa, in Hawaii, is the largest above-sea-level volcano. In 27 and 28, use the diagram of Mauna Loa.



27. **Reasoning** Use a negative integer to represent the depth, in feet, of the sea floor. MP.2

$-16,500$ ft

28. Mauna Loa depresses the sea floor, resulting in 26,400 more feet added to its height. What is the total height of Mauna Loa?

56,600 ft

29. **Higher Order Thinking** In math, a letter such as p can be assigned as a variable to represent an unknown value. Give an example of a value for p that results in $-p$ being a positive integer. Explain.

Ex: $p = -3$

$-(-3)$

3

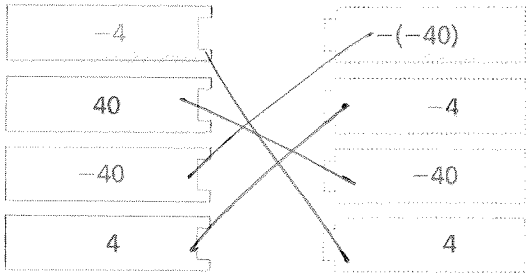
30. Roberto and Jeanne played a difficult computer game. Roberto's final score was -60 points, and Jeanne's final score was -160 points. Use $<$, $>$, or $=$ to compare the scores, then find the player who had the higher final score.

$-60 > -160$

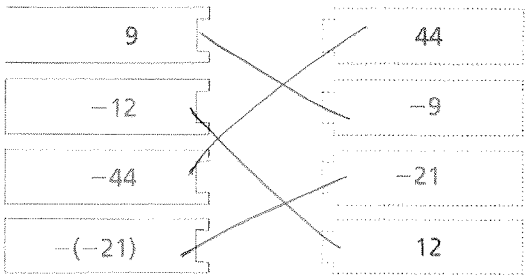
Roberto's score was higher.

Assessment Practice

31. Draw lines to connect each integer on the left with its opposite on the right.



32. Draw lines to connect each integer on the left with its opposite on the right.



Name:

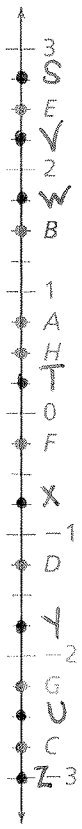
2-2 Additional Practice

Scan for Multimedia

In 1–8, write the number positioned at each point on the number line at the right.

1. A $.75\left(\frac{3}{4}\right)$ 2. B $1.5\left(1\frac{1}{2}\right)$ 3. C $-2.75\left(-2\frac{3}{4}\right)$ 4. D $-1.25\left(-1\frac{1}{4}\right)$

5. E $2.5\left(2\frac{1}{2}\right)$ 6. F $-.25\left(-\frac{1}{4}\right)$ 7. G $-2.25\left(-2\frac{1}{4}\right)$ 8. H $.5\left(\frac{1}{2}\right)$

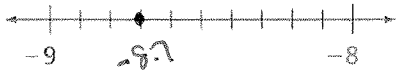


In 9–16, plot each point on the number line at the right.

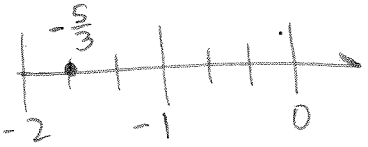
9. $S(2.75)$ 10. $T\left(\frac{1}{4}\right)$ 11. $U\left(-2\frac{1}{2}\right)$ 12. $V(2.25)$

13. $W\left(1\frac{3}{4}\right)$ 14. $X(-0.75)$ 15. $Y(-1.75)$ 16. $Z\left(-\frac{3}{1}\right)$

17. Plot -8.7 on the number line below.



18. Draw a number line and plot $-\frac{5}{3}$.



In 19–26, use <, >, or = to compare.

19. $-12 > -15$ 20. $-\frac{1}{3} > -1$ 21. $-2 > -2.1$ 22. $\frac{1}{5} < \frac{1}{4}$

23. $\frac{7}{10} > -0.85$ 24. $-0.66 > -\frac{3}{4}$ 25. $-4\frac{1}{2} < -3.9$ 26. $7\frac{1}{2} < 7.75$

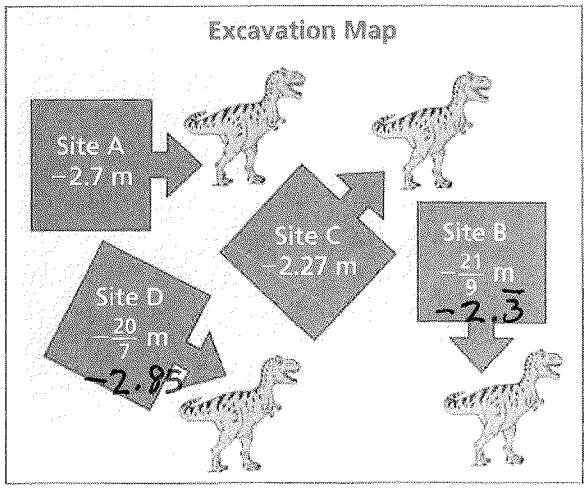
In 27 and 28, use the map at the right.

27. The map shows how deep archaeologists have dug at several excavation sites. Order the archaeological excavation sites from the least depth to the greatest depth.

C, B, A, D

28. Archaeologists are excavating a new Site E. On a number line, the depth of Site E is between the depths of Site A and Site B. What is a possible depth of Site E?

Ex -2.5



In 29–31, use the table at the right.

Track Members	Long Jump Length Relative to State Qualifying Distance
Theresa	−5.625 in.
Ann	2 in.
Shirley	−3 in.
Delia	0 in.

29. Reasoning Suppose you plot the lengths in the table on a number line. Which track member's long jump length would be represented by the point closest to, but not equal to, 0 on the number line? Explain. MP.2

ANN (2 in) ONLY 2 AWAY FROM 0

30. Delia's relative long jump length was recorded as 0. What does this mean?

IT WAS RIGHT ON THE QUALIFYING MARK

31. Construct Arguments Which track members did **NOT** qualify for the state championship? Construct an argument to explain how you know. MP.3

THERESA & SHIRLEY; THEY WERE BOTH SHORT OF THE MARK.

32. Make Sense and Persevere Order $-6\frac{1}{4}$, -6.35, $-6\frac{1}{5}$, and -6.1 from greatest to least. Explain. MP.1

-6.25 -6.2

$-6.35, -6\frac{1}{4}, -6\frac{1}{5}, -6.1$

33. Higher Order Thinking Tyler says there are infinitely many rational numbers between 0 and 1. Do you agree? Explain.

YES, EX. IF A DECIMAL YOU CAN ALWAYS ADD 1 MORE PLACE.

Assessment Practice

34. Which inequality is true?

Ⓐ $6.5 > \frac{25}{4}$ $6\frac{1}{4}$ (6.25)

Ⓑ $-6.5 > -\frac{25}{4}$ $-6\frac{1}{4}$

Ⓒ $-6 > -5$

Ⓓ $5 > \frac{25}{4}$ $6\frac{1}{4}$

35. The numbers below are listed in order from least to greatest. Which could be a value for m?

$$-0.75,\ m,\ -\frac{1}{2},\ 0$$

Ⓐ $\frac{2}{3}$

Ⓑ $\frac{1}{3}$

Ⓒ $-\frac{2}{3}$ $-.\overline{6}$

Ⓓ $-\frac{1}{3}$

Name:

2-3 Additional Practice

Scan for Multimedia

In 1–16, find each absolute value.

1. $|-21|$ 21
2. $|7|$ 7
3. $|-\frac{3}{5}|$ $\frac{3}{5}$
4. $|-5.5|$ 5.5
5. $|8\frac{3}{4}|$ $8\frac{3}{4}$
6. $|-19.5|$ 19.5
7. $|48\frac{3}{8}|$ $48\frac{3}{8}$
8. $|-102.06|$ 102.06
9. $|-22|$ 22
10. $|45|$ 45
11. $|13|$ 13
12. $|48|$ 48
13. $|-55.5|$ 55.5
14. $|21\frac{1}{3}|$ $21\frac{1}{3}$
15. $|-2.6|$ 2.6
16. $|-9|$ 9

In 17–20, order the numbers from least to greatest.

17. $|-20|, |16|, |-2|, |37|$

$|-2|, |16|, |-20|, |37|$

18. $|\frac{1}{4}|, |-\frac{1}{3}|, |-\frac{1}{8}|, |0|$

$|0|, |-\frac{1}{8}|, |\frac{1}{4}|, |-\frac{1}{3}|$

19. $|-1.5|, |1\frac{3}{4}|, |2.5|, |-2|$

$|-1.5|, |1\frac{3}{4}|, |-2|, |2.5|$

20. $|6|, |0|, |-9|, |-4.2|$

$|0|, |-4.2|, |6|, |-9|$

21. Four submarines are exploring an undersea trench. The depth of each submarine is shown. Use absolute values to represent the distance of each submarine from sea level. Which submarine is closest to sea level?

W

Submarine Depths

Submarine	Depth (km)	
W	−1.5	1.5
X	−3.4	3.4
Y	−2.6	2.6
Z	−4	4

22. Three friends started savings accounts at the same time, with the same initial deposit. The table at the right shows the total change in each friend's account after two months. List the friends in order from least to greatest total change in bank account balance.

FRANKLIN, LOUISE, HANNAH

Bank Accounts

Account Owner	Amount of Change
Louise	−$56.84
Franklin	$28.69
Hannah	$89.12

23. The table at the right shows the changes in the number of items answered correctly from a first math test to a second math test for five students. Order the students based on the least change to the greatest change.

BETH, MICAH, ANTOINE, PAT, LAUREN

Student	Change in Number of Correct Answers
Antoine	4
Lauren	−6
Micah	3
Beth	0
Pat	−5

24. **Higher Order Thinking** Is it possible that Lauren answered more questions correctly on the second math test than Antoine did? Explain.

YES. LAUREN STARTED WITH 11 OR MORE CORRECT ANSWERS THAN ANTOINE.

25. **Vocabulary** Use $<$, $>$, or $=$ to compare the *absolute values* of -0.3 and $\frac{1}{4}$. Explain.

$|-.3| \geq |\frac{1}{4}|$

$.30 > .25$

26. A bird flies $13\frac{7}{10}$ feet above sea level. A fish swims $16\frac{1}{5}$ feet below sea level. Which is farther from sea level?

FISH

27. Which account's balance represents a debt greater than \$50?

A

Account	Balance (\$)
A	−60
B	−25
C	−35

Assessment Practice

28. The table below shows the daily low temperatures for four days.

Day	Low Temperature
Monday	3°F
Tuesday	−4°F
Wednesday	−1°F
Thursday	2°F

PART A

Arrange the temperatures in order from coldest to warmest.

$-4, -1, 2, 3$

PART B

Which was the coldest day?

TUESDAY

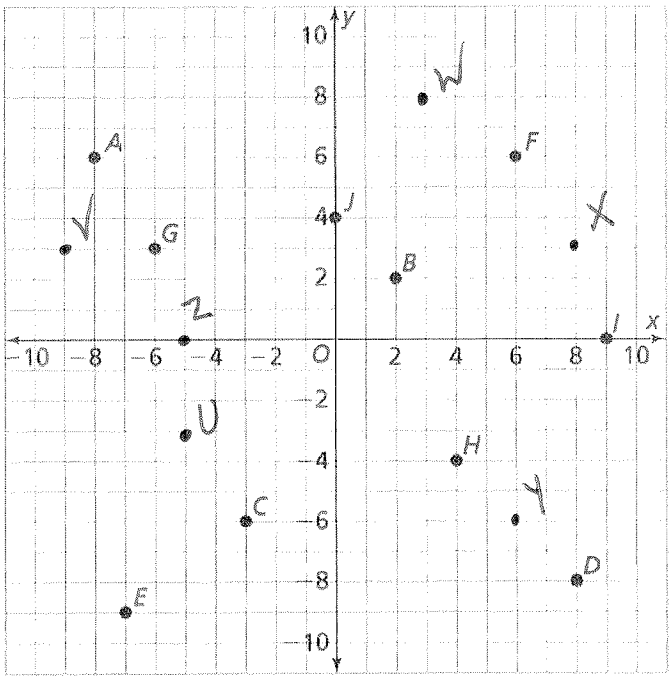
Name:

2-4 Additional Practice

Scan for Multimedia

In 1–10, write the ordered pair for each point.

1. A $(-8, 6)$
2. B $(2, 2)$
3. C $(-3, 6)$
4. D $(8, -8)$
5. E $(-7, -9)$
6. F $(6, 6)$
7. G $(-6, 3)$
8. H $(4, -4)$
9. I $(9, 0)$
10. J $(0, 4)$

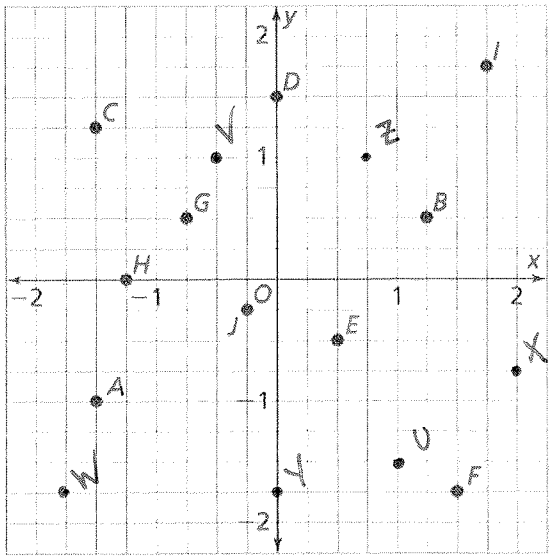


In 11–16, graph and label each point.

11. $U(-5, -3)$
12. $V(-9, 3)$
13. $W(3, 8)$
14. $X(8, 3)$
15. $Y(6, -6)$
16. $Z(-5, 0)$

In 17–26, write the ordered pair for each point.

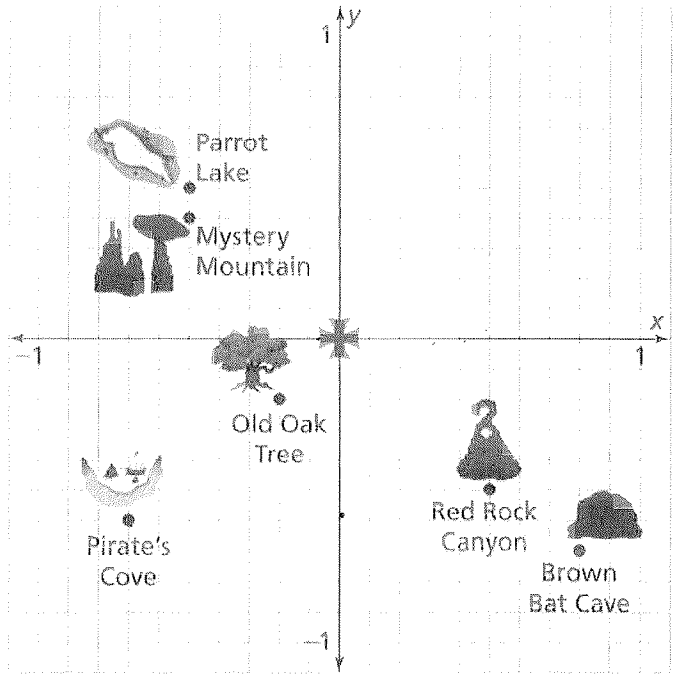
17. A $(-1.5, -1)$
18. B $(1.25, .5)$
19. C $(-1.5, 1.25)$
20. D $(0, 1.5)$
21. E $(.5, -.5)$
22. F $(1.5, -1.75)$
23. G $(-.75, .5)$
24. H $(-1.25, 0)$
25. I $(1.75, 1.75)$
26. J $(-.25, -.25)$



In 27–32, plot and label each point.

27. $U(1, -1.5)$
28. $V\left(-\frac{1}{2}, 1\right)$
29. $W\left(-1\frac{3}{4}, -1\frac{3}{4}\right)$
30. $X(1.75, -0.75)$
31. $Y\left(0, -1\frac{3}{4}\right)$
32. $Z\left(\frac{3}{4}, 1\right)$

In 33–37, use the coordinate plane at the right.



33. What is located at (0.5, −0.5)?

RED ROCK CANYON

34. What is located at $\left(-\frac{1}{2}, \frac{2}{5}\right)$?

MYSTERY MOUNTAIN

35. Write the ordered pair to locate Brown Bat Cave.

(.8, −.7)

36. Higher Order Thinking Suppose ✠ marks the spot where the treasure is buried. Explain the shortest route, using grid lines as units, from Pirate's Cove to the treasure.

1.3 UNITS

37. Which two locations are reflections of each other across one or both of the axes of the coordinate plane?

PARROT LAKE & RED ROCK CANYON

Assessment Practice

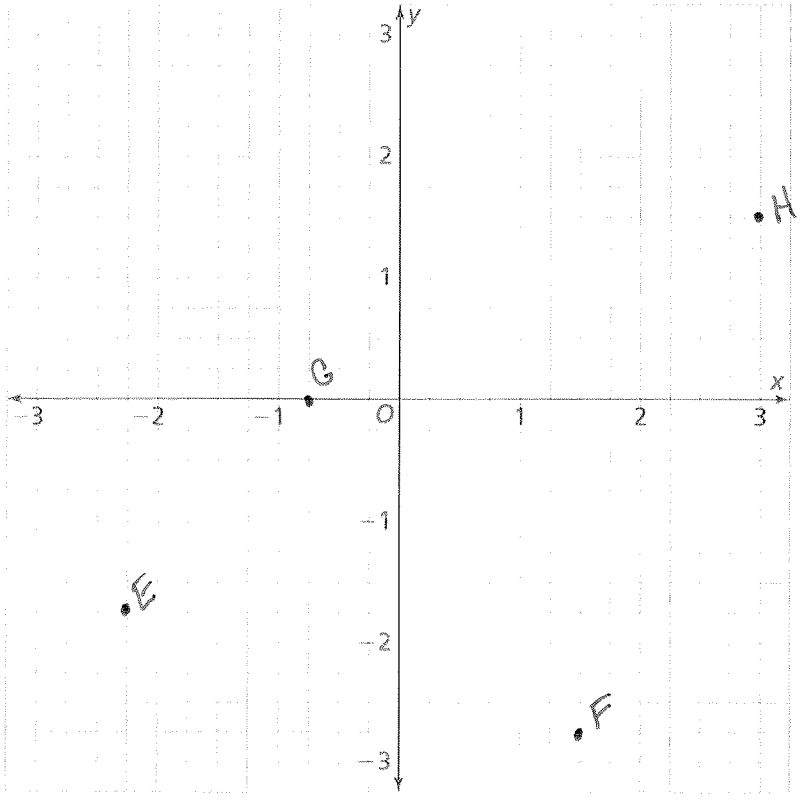
38. Graph and label each point on the coordinate plane at the right.

$E\left(-2\frac{1}{4}, -1\frac{3}{4}\right)$

$F(1.5, -2.75)$

$G(-0.75, 0)$

$H(3, 1.5)$



Name:

PRACTICE TUTORIAL

2-5 Additional Practice

Scan for Multimedia

Leveled Practice In 1–8, find the distance between each pair of points.

1. (5, −6) and (2, −6)

$|5| - |2|$

$= 5 - 2$

$= 3$ units

2. (−6, −4.7) and (−6, 4.1)

$|-4.7| + |4.1|$

$= 4.7 + 4.9$

$= 8.8$ units

3. $\left(-2\frac{1}{2}, 1\frac{3}{4}\right)$ and $\left(-1\frac{1}{4}, 1\frac{3}{4}\right)$

$\left|-2\frac{1}{2}\right| - \left|-1\frac{1}{4}\right|$

$= 2\frac{1}{2} - 1\frac{1}{4}$

$= 1\frac{1}{4}$ units

4. (−7, −4) and (−7, 9)

$|-4| + |9|$

$= 4 + 9$

$= 13$ units

5. (2.4, 1.8) and (−0.6, 1.8)

3 UNITS

6. $\left(7\frac{1}{2}, -6\right)$ and $\left(7\frac{1}{2}, -2\frac{1}{2}\right)$

$3\frac{1}{2}$ UNITS

7. (0, −6) and (−10, −6)

10 UNITS

8. (−3, 8.5) and (−3, 7.7)

.8 UNITS

In 9–12, use the map at the right.

9. Find the distance from the fishing area to the canoes.

6 UNITS

10. What is the distance from the swimming area to the water slide?

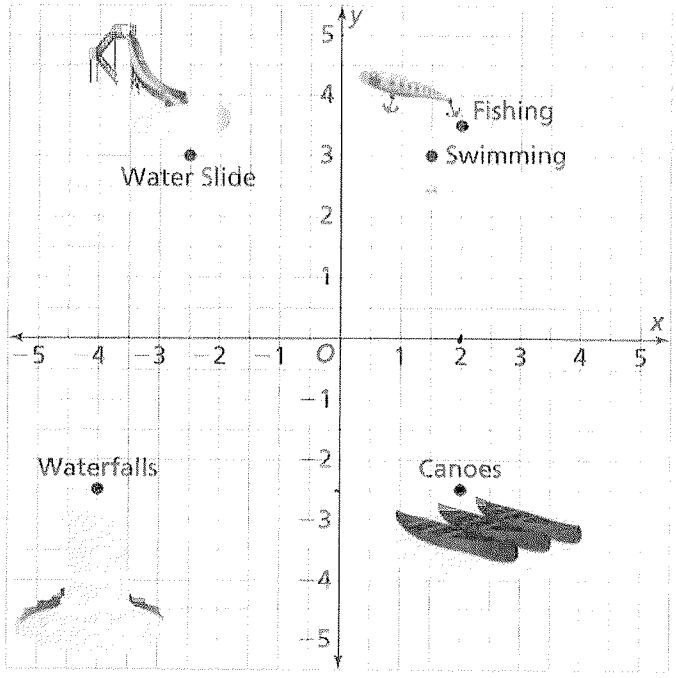
4 UNITS

11. Find the total distance from the waterfalls to the canoes and then to the fishing area.

12 UNITS

12. **Higher Order Thinking** What are the coordinates of the reflection of the water slide across both axes?

2.5, -3



Name:

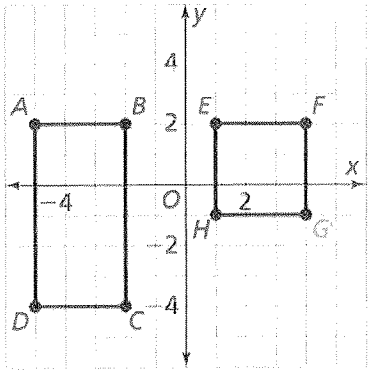
2-6 Additional Practice

Scan for Multimedia

In 1 and 2, use the coordinate plane at the right.

1. What is the perimeter of rectangle *ABCD*?

18 UNITS



2. What is the perimeter of square *EFGH*?

12 UNITS

3. Polygon *QRST* has vertices $Q\left(4\frac{1}{2}, 2\right)$, $R\left(8\frac{1}{2}, 2\right)$, $S\left(8\frac{1}{2}, -3\frac{1}{2}\right)$, and $T\left(4\frac{1}{2}, -3\frac{1}{2}\right)$. Is polygon *QRST* a rectangle? Justify your answer.

YES, 4 PAIRS OF MATCHING COORDINATES

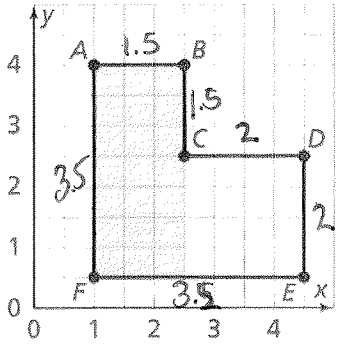
4. You draw a rectangle with vertices at (−3.5, 3), (3.5, 3), (3.5, −3), and (−3.5, −3). What is the perimeter and area of the rectangle?

PERI: 26 UNITS
AREA: 42 UNITS^2

In 5–7, use the coordinate plane at the right.

5. Madison used a coordinate plane to map out an L-shaped herb garden, shown at the right. Each unit on the grid represents $\frac{1}{2}$ yard. To buy a fence for the garden, she needs to know its perimeter. What is the perimeter of the garden?

14 YDS



6. Madison plants rosemary in the shaded section of the garden. What is the perimeter of the shaded section?

10 YDS

7. Madison plants sage in the unshaded section of the garden. What is the perimeter of the unshaded section?

8 YDS