

Ch 6-7

Multiple Choice

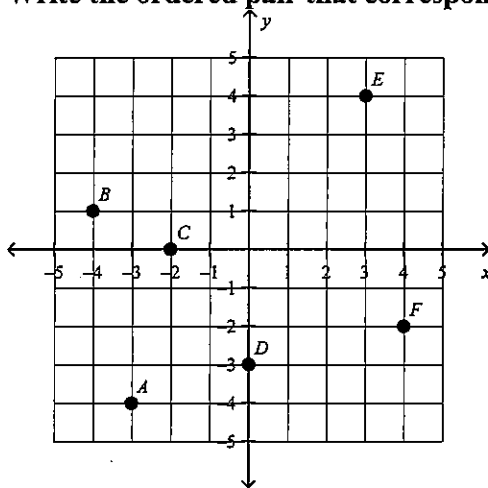
Identify the choice that best completes the statement or answers the question.

- _____ 1. Which set of ordered pairs are the vertices of a square?
- a. $W(1,0), X(1,3), Y(3,1), Z(3,0)$
 - b. $W(-4,2), X(-1,2), Y(-1,-2), Z(-4,-2)$
 - c. $W(1,-3), X(4,-2), Y(4,-5), Z(1,-6)$
 - d. $W(-2,5), X(2,5), Y(2,1), Z(-2,1)$

Name the word that matches the definition given.

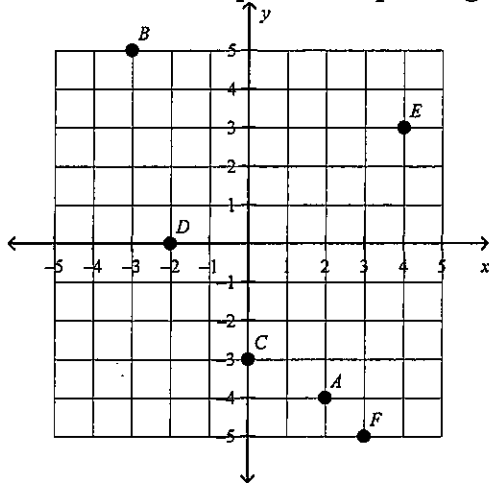
- _____ 2. The set of whole numbers and their opposites
- a. positive numbers
 - b. negative numbers
 - c. opposites
 - d. integers
 - e. absolute value
 - f. quadrants

Write the ordered pair that corresponds to the point.



- _____ 3. Point E
- a. $(-4, -3)$
 - b. $(4, 3)$
 - c. $(3, 4)$
 - d. $(-3, -4)$

Write an ordered pair corresponding to the point.



- _____ 4. Point D
- | | |
|--------------|--------------|
| a. $(0, -2)$ | c. $(-0, 2)$ |
| b. $(-2, 0)$ | d. $(2, -0)$ |
- _____ 5. Which equation is NOT true for all numbers a and b ?
- | | |
|--------------------------------|-------------------------|
| a. $a + (b + c) = (a + b) + c$ | c. $a(b + c) = ab + ac$ |
| b. $(a + b) \times 1 = a + b$ | d. $a + b + 1 = a + b$ |

Match the equation and the word sentence.

- _____ 6. 9 is 3 less than a number n .
- | | |
|----------------------|----------------|
| a. $\frac{n}{3} = 9$ | c. $3n = 9$ |
| b. $n - 3 = 9$ | d. $n + 3 = 9$ |
- _____ 7. The sum of a number n and 3 is 9.
- | | |
|----------------------|----------------|
| a. $\frac{n}{3} = 9$ | c. $3n = 9$ |
| b. $n - 3 = 9$ | d. $n + 3 = 9$ |
- _____ 8. The product of a number n and 3 is 9.
- | | |
|----------------------|----------------|
| a. $\frac{n}{3} = 9$ | c. $3n = 9$ |
| b. $n - 3 = 9$ | d. $n + 3 = 9$ |

Write the word sentence as an equation.

- _____ 9. 24 is equal to three-eighths of a number z .
- | | |
|------------------------------|--------------------------------|
| a. $24 = \frac{3}{8} \div z$ | c. $24 = \frac{3}{8}z$ |
| b. $24 = \frac{3}{8} + z$ | d. $\frac{3}{8} \times 24 = z$ |

Solve the equation. Check your solution.

_____ 10. $n + \frac{1}{3} = \frac{5}{9}$

a. $\frac{2}{9}$

b. $\frac{8}{9}$

c. $\frac{4}{9}$

d. $\frac{4}{27}$

_____ 11. $\frac{7}{8} = s - \frac{1}{5}$

a. $\frac{27}{40}$

b. $\frac{1}{5}$

c. 1

d. $1\frac{3}{40}$

_____ 12. $15.8 = \frac{d}{25}$

a. 395

b. 40.8

c. 9.2

d. $\frac{79}{125}$

_____ 13. $21 = 7 \cdot n$

a. 14

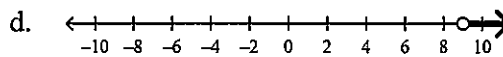
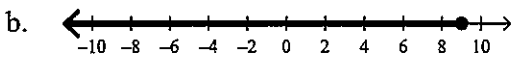
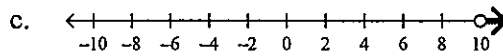
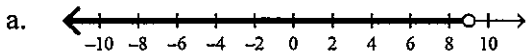
b. 3

c. 147

d. 126

Graph the inequality on a number line.

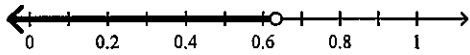
_____ 14. $x < 9$



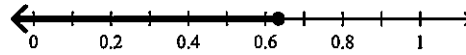
Solve the inequality. Graph the solution.

15. $\frac{1}{5} + b > \frac{5}{6}$

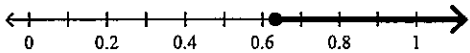
a. $b < \frac{19}{30}$;



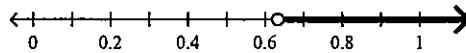
c. $b \leq \frac{19}{30}$;



b. $b \geq \frac{19}{30}$;



d. $b > \frac{19}{30}$;



Numeric Response

Write a positive or negative integer that represents the situation.

- You get a \$1 raise.
- A swimmer is 4 feet below the surface of the water.

Find the absolute value.

- $|8|$
- $|12|$
- $|31|$
- What is the least common multiple of 10 and 16?

Find the absolute value of the integer.

- 23

Simplify the expression.

- $-|5|$
- What value of x makes the equation below true?

$$\frac{x}{8} = 16$$

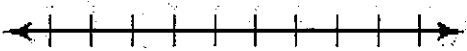
Solve the equation. Check your solution.

10. $c + 10 - 5 = 25$

Short Answer

Graph the integer and its opposite.

1. 4

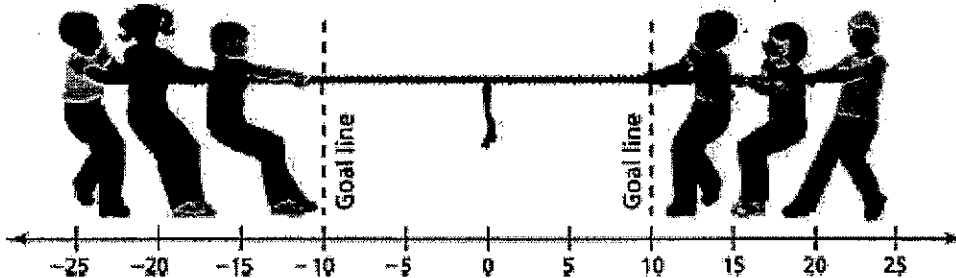


2. 4

3. A coal mine worker is 650 feet below the ground in a mine. Another coal mine worker is 7 feet above ground operating machinery.
- Write an integer for the position of each worker relative to the ground.
 - Find the absolute value of each integer.
 - Which worker is farther from the ground surface?
4. The vertices of rectangle WXYZ are $W(-4, -3)$, $X(-4, 1)$ and $Y(2, 1)$
- What are the coordinates of the fourth vertex?
 - Find the perimeter of the rectangle.
 - Find the area of the rectangle.
5. Reflect the point in (a) the x -axis and (b) the y -axis.

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

6. In a game of *tug-of-war*, a team wins by pulling the flag over their goal line. The flag begins at 0. During a game, the flag moves 4 feet to the left, 13 feet to the right, and 14 feet back to the left. Did a team win? Explain.



Complete the statement using $<$, $>$, or $=$.

7. -15 ? $|15|$

Order the values from least to greatest.

8. $5, |-6|, |-9|, |7|, -7$

9. Is the point $(3, 0)$ on the x -axis or the y -axis?

Tell whether the ordered pair is a solution of the equation.

10. $y = 12x$; $(3, 32)$

Write the word sentence as an inequality.

11. 15 is more than a number x .

12. You have \$8 and a \$5 off coupon to buy snacks at a concession stand. Write and solve an inequality to represent the regular price of snacks you can buy if you use the coupon.

13. One third of the viewers at a movie opening rated the movie as Good or Very Good. Thirty-five people rated it Good and twenty people rated it Very Good. Write and solve an equation to find the number of people p in the audience.

Tell whether the given value is a solution of the inequality.

14. $c + 4.1 < 7.9$; $c = 3.3$

15. Students at a playground are divided into 10 equal groups with at least 7 students in each group. Write and solve an inequality to represent the number of students at the playground.