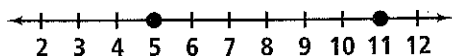


# Cumulative Review

## Chapters 1–3

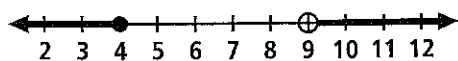
For Exercises 1–9, choose the correct letter.

1. Which of the following can be represented by this graph?



- A.  $5 < b < 11$       B.  $11 \geq b \geq 5$       C.  $|8 - b| = 8$       D.  $|b - 8| = 3$

2. Which inequality can be represented by this graph?

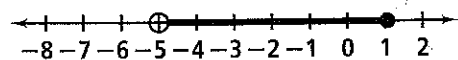


- A.  $9 \leq b \leq 4$       B.  $b \geq 9$  or  $b > 4$       C.  $b \leq 4$  or  $b > 9$       D.  $b < 4$  or  $b > 9$

3. If  $7x + 3 = 24$ , find the value of  $5 - 4x$ .

- A.  $-23$       B.  $-7$       C.  $1$       D.  $17$

4. Which of the following sentences is represented by this graph?



- A.  $t$  is greater than  $-5$  or less than  $1$ .      B.  $t$  is between  $-5$  and  $1$ .  
C.  $t$  is greater than  $-5$  and less than  $1$ .      D.  $t$  is less than or equal to  $1$  and greater than  $-5$ .

5. In which quadrant would the point  $(-2, 4)$  be located?

- A. I      B. II      C. III      D. IV

6. Which matrix is the sum  $\begin{bmatrix} -3 & 6 \\ 2 & -1 \end{bmatrix} + \begin{bmatrix} 6 & -2 \\ -5 & 3 \end{bmatrix}$ ?

- A.  $\begin{bmatrix} -9 & 4 \\ -7 & 2 \end{bmatrix}$       B.  $\begin{bmatrix} -9 & 8 \\ 7 & -4 \end{bmatrix}$       C.  $\begin{bmatrix} 3 & -4 \\ 3 & -2 \end{bmatrix}$       D.  $\begin{bmatrix} 3 & 4 \\ -3 & 2 \end{bmatrix}$

7. Which of the following equations represents the formula for the perimeter of a rectangle,  $P = 2\ell + 2w$ , solved for  $\ell$ ?

- A.  $\ell = P - \frac{w}{2}$       B.  $\ell = \frac{P - w}{2}$       C.  $\ell = \frac{P}{2} - w$       D.  $\ell = 2(P - w)$

8. The formula  $C = \frac{5}{9}(F - 32)$  is used to convert temperatures from Fahrenheit to Celsius. What is  $55^\circ\text{C}$  in degrees F?

- A.  $131^\circ\text{F}$       B.  $12.7^\circ\text{F}$       C.  $156.6^\circ\text{F}$       D.  $62.5^\circ\text{F}$

9. Solve  $\frac{3}{2.5} = \frac{d}{75}$ .

- A.  $90$       B.  $62.5$       C.  $74.5$       D.  $225$

**Cumulative Review (continued)****Chapters 1–3**

Compare the quantities in Column A and Column B. Choose the best answer.

- A. The quantity in Column A is greater.  
B. The quantity in Column B is greater.  
C. The two quantities are equal.  
D. The relationship cannot be determined on the basis of the information supplied.

**Column A****Column B**

10.  $|x - 3|$  for  $x = -7$        $|x - 7|$  for  $x = -3$   
11.  $5n + 6$        $2n + 15$   
12. Evaluate  $b^2 - 4ac$  for  $a = -1$ ,  $b = -5$ , and  $c = 2$ .  
13. Simplify  $4 - 3(2^2 - 5)$ .  
14. Javier is on a diet. He is supposed to eat at least 1500 but not more than 1800 calories per day. Before his last meal of the day, he had consumed 1150 calories. According to Javier's diet plan, what number of calories may he consume at his last meal of the day?  
15. The Bagel Factory's sales of plain bagels are given.

Day	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Number of dozen	7	6	8	9	18	12	10

Which measure of central tendency best represents the data? Why?

16. Translate the sentence into an equation, and then solve.  
Four less than five times a number is 21.  
17. **Open-Ended** Write an absolute value inequality that has no solution.

**Solve each equation.**

18.  $n + 4 = 6$       19.  $3t + 3 = -12$       20.  $2(3d + 1) = 20$   
21.  $2p = -8$       22.  $|4a - 2| = 10$       23.  $5k + 6 = 5(k + 1)$   
24. Solve for  $g$  if  $|9 - 3g| \leq 12$ .  
25. Solve and graph  $15c - 4 \leq 12c + 5$  on the number line.  
26. **Writing** Explain why the following matrix addition is impossible.

$$\begin{bmatrix} 2 & 4 \\ -1 & -2 \\ 3 & -6 \end{bmatrix} + \begin{bmatrix} 3 & -1 & 5 \\ 2 & -2 & 0 \end{bmatrix}$$