

1. Find the slope-intercept equation of the line that has the given characteristics.

Slope $-\frac{9}{5}$ and y-intercept $(0, -9)$

The slope-intercept equation is _____.

(Type an equation. Type your answer in slope-intercept form. Use integers or fractions for any numbers in the equation. Simplify your answer.)

2. Find the slope-intercept equation of the line that has the given characteristics.

Slope 9 and y-intercept $(0,4)$

The slope-intercept equation is _____.

(Type an equation. Type your answer in slope-intercept form. Use integers or fractions for any numbers in the equation. Simplify your answer.)

3. Write a slope-intercept equation for a line with the given characteristics.

$m = \frac{4}{15}$, passes through $(5,8)$

The slope-intercept equation for the line with the given characteristics is _____.

(Simplify your answer. Type an equation. Use integers or fractions for any numbers in the equation.)

4. Write a slope-intercept equation for a line that passes through $(-1,1)$ and $(2, -5)$.

The slope-intercept equation for the line is _____.

(Simplify your answer. Type an integer or a simplified fraction. Type an equation.)

5. Write a slope-intercept equation for a line that passes through $(3,0)$ and $(-5,2)$.

The slope-intercept equation for the line is _____.

(Simplify your answer. Use integers or fractions for any numbers in the equation.)

6. Determine whether the pair of lines is parallel, perpendicular, or neither.

$y = -\frac{3}{14}x + 1$

$y = -\frac{14}{3}x - 1$

Choose the correct answer below.

- A. Perpendicular
 B. Parallel
 C. Neither

7. Determine whether the pair of lines is parallel, perpendicular, or neither.

$$y = \frac{4}{7}x - 4,$$

$$y = -\frac{4}{7}x + 4$$

Choose the correct answer below.

- neither parallel nor perpendicular
 parallel
 perpendicular

8. Write a slope-intercept equation for a line passing through the point (6, 19) that is parallel to $y = \frac{1}{2}x + 17$. Then write a second equation for a line passing through the given point that is perpendicular to the given line.

Which answer below is correct?

- A. parallel: $y = \frac{1}{2}x + 19$ perpendicular: $y = -2x + 19$
 B. parallel: $y = \frac{1}{2}x + 16$ perpendicular: $y = 2x + 31$
 C. parallel: $y = \frac{1}{2}x + 16$ perpendicular: $y = -2x + 31$

9. Write a slope-intercept equation for a line passing through the point (3, -2) that is parallel to the line $3x + 4y = 5$. Then write a second equation for a line passing through the point (3, -2) that is perpendicular to the line $3x + 4y = 5$.

The equation of the parallel line is _____.

(Simplify your answer. Type your answer in slope-intercept form. Use integers or fractions for any numbers in the expression.)

The equation of the perpendicular line is _____.

(Simplify your answer. Type your answer in slope-intercept form. Use integers or fractions for any numbers in the expression.)

10. Write an equation in standard form for the line described.

through (5,5), $m = 0$

Choose the correct equation of the line.

- A. $y = 5$
 B. $y + 5 = 5$
 C. $x + y = 10$
 D. $x = 5$

11. Write equations of the horizontal and the vertical lines that pass through the point $(4, -2)$.

What is the equation of the horizontal line?

- A. $x = -2$ B. $x = 4$
 C. $y = 4$ D. $y = -2$

What is the equation of the vertical line?

- A. $x = -2$ B. $x = 4$
 C. $y = -2$ D. $y = 4$

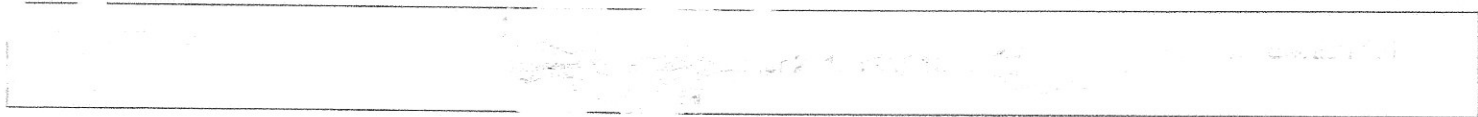
12. Write equations of the horizontal and the vertical lines that pass through the point $(\frac{1}{10}, 4)$.

What is the equation of the horizontal line?

- A. $x = 4$ B. $y = \frac{1}{10}$
 C. $y = 4$ D. $x = \frac{1}{10}$

What is the equation of the vertical line?

- A. $x = \frac{1}{10}$ B. $y = \frac{1}{10}$
 C. $x = 4$ D. $y = 4$



1. Solve the following equation.

$$8x + 8 = 56$$

Select the correct choice below and, if necessary, fill in the answer box.

- A. The solution is _____.
(Type an integer or a simplified fraction.)
- B. The solution set is $(-\infty, \infty)$.
- C. There is no solution.

2. Solve.

$$29 - \frac{2}{9}x = -\frac{2}{9}x + 29$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $x =$ _____ (Type an integer or a simplified fraction.)
- B. The solution is all real numbers.
- C. There is no solution.

3. Solve.

$$6 - \frac{1}{9}x = \frac{16}{3}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $x =$ _____ (Type an integer or a simplified fraction.)
- B. The solution is all real numbers.
- C. There is no solution.

4. Solve the following equation.

$$4x + 10 = 3x + 1$$

Select the correct choice below and, if necessary, fill in the answer box.

- A. The solution is _____.
(Type an integer or a simplified fraction.)
- B. The solution set is $(-\infty, \infty)$.
- C. There is no solution.

5. Solve the following equation.

$$7x - 1 + 9x = 6x + 4 - 8x$$

Select the correct choice below and, if necessary, fill in the answer box.

- A. The solution is _____. (Simplify your answer.)
- B. The solution set is $(-\infty, \infty)$.
- C. There is no solution.

6. Solve using the principles together. Don't forget to check.

$$7(5x + 9) = 18 - (x + 9)$$

What is the solution? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution is $x =$ _____. (Type an integer or a simplified fraction.)
- B. The solution is all real numbers.
- C. There is no solution.

7. Find the zero of the linear function.

$$f(x) = -4x + 15$$

$x =$ _____ (Simplify your answer.)

8. Find the zero of the linear function.

$$f(x) = \frac{2}{5}x - 8$$

$x =$ _____
(Type an integer or a simplified fraction.)

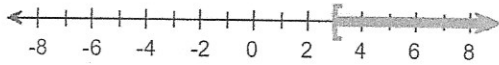
1. Solve and graph the solution set.

$$8x - 1 > 5x + 8$$

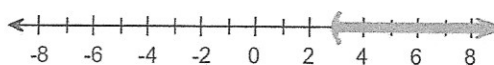
The solution set is $\{x \underline{\hspace{2cm}}\}$.

Choose the correct graph below.

A.



B.



C.



D.



2. Solve the following inequality and graph the solution set.

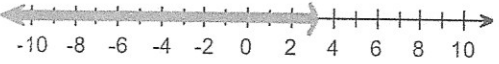
$$x + 4 < 3x - 2$$

The solution set is $\underline{\hspace{2cm}}$.

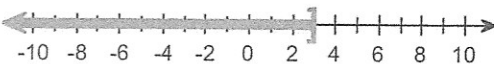
(Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)

Choose the correct graph below.

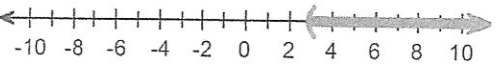
A.



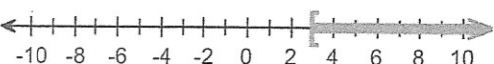
B.



C.



D.



3. Solve and graph the solution set.

$$9x - 3 > 5x + 17$$

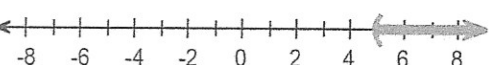
The solution set is $\{x \underline{\hspace{2cm}}\}$.

Choose the correct graph below.

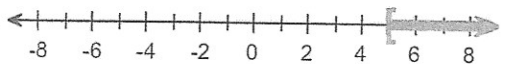
A.



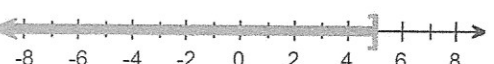
B.



C.



D.



4. Determine the domain of the following function.

$$y = \sqrt{x - 5}$$

The domain is $\underline{\hspace{2cm}}$.

(Type your answer in interval notation.)

5. Find the domain of the following function.

$$g(x) = \frac{3}{\sqrt{12+x}}$$

The domain is _____.
(Type your answer in interval notation.)

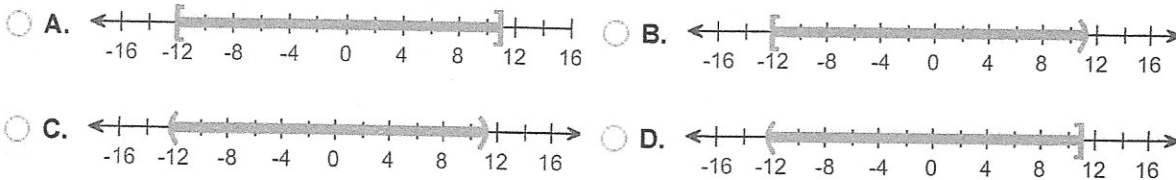
6. Solve and graph the compound inequality.

$$-9 < x + 3 < 14$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution set in interval notation is _____.
- B. There is no solution.

Choose the graph of the solution set.



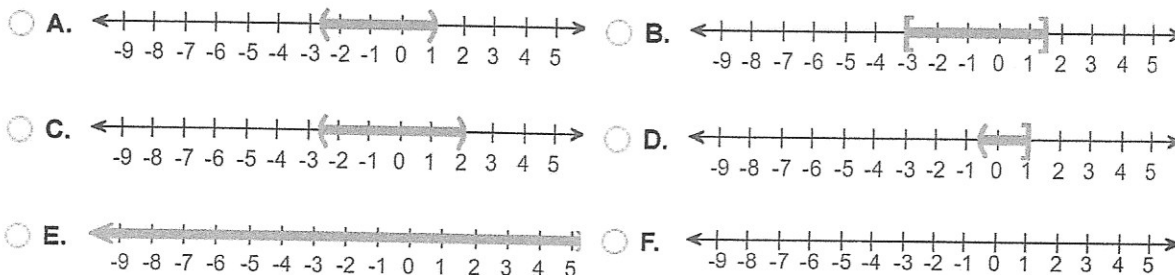
7. Solve and write interval notation for the solution set. Then graph the solution set.

$$-4 < 2x + 1 < 3$$

Select the correct choice below and fill in any answer boxes in your choice.

- A. The solution set is _____.
(Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)
- B. There is no solution.

Choose the graph of the solution set.



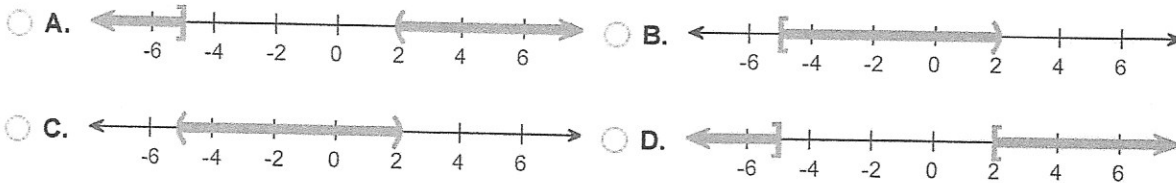
8. Solve and graph.

$$-2 < 2 - 2x \leq 12$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The solution set in interval notation is _____.
- B. There is no solution.

Choose the graph of the solution set.



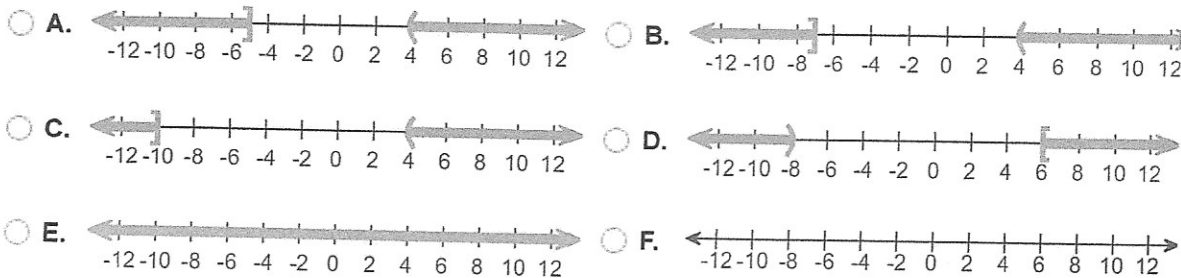
9. Solve and write interval notation for the solution set. Then graph the solution set.

$$6x \leq -42 \text{ or } x - 4 > 0$$

Select the correct choice below and fill in any answer boxes in your choice.

- A. The solution set is _____.
(Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)
- B. There is no solution.

Choose the correct graph below.



10. Solve and write interval notation for the solution set. Then graph the solution set.

$$2x + 1 \leq -10 \text{ or } 2x + 1 \geq 10$$

Select the correct choice below and fill in any answer boxes in your choice.

- A. The solution set is _____.
(Type your answer in interval notation. Use integers or fractions for any numbers in the expression.)
- B. There is no solution.

Choose the correct graph below.

