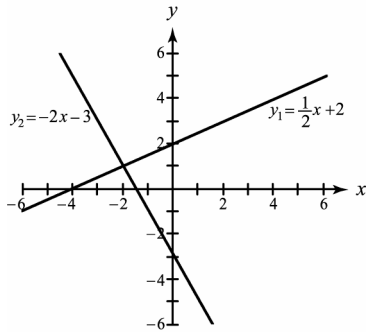


1. Solve  $-2 = -8 + 2x$ . Check your answer.

1. \_\_\_\_\_

For #2 and #3, use the accompanying graph to solve the equation and inequality.



2. Solve  $y_1 = y_2$ .

2. \_\_\_\_\_

3. Solve  $y_1 < y_2$ . Write your answer in interval notation.

3. \_\_\_\_\_

4. Solve  $5 - 2x = x - 4$  graphically.

4. \_\_\_\_\_

5. Solve  $2(4x - 3) + 1 = x$ .

5. \_\_\_\_\_

6. Translate the sentence into an equation and then solve.  
 "If 2 is subtracted from 3 times  $x$ , it equals  $x$  minus 4."

6. \_\_\_\_\_  
 \_\_\_\_\_

7. Solve  $3x - 5y = 10$  for  $y$ . Let  $y = f(x)$  and write a formula for  $f(x)$ .

7. \_\_\_\_\_

8. Solve the inequality  $-2 - x \geq 8 + 3x$ . Write your answer in interval notation.

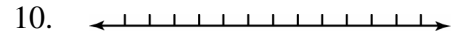
8. \_\_\_\_\_

9. Solve the inequality  $3 + 4(x - 2) < x + 1$ . Write your answer in interval notation.

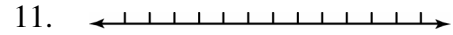
9. \_\_\_\_\_

In #10 and #11, graph the solution set to the compound inequality on a number line.

10. Solve  $2x+3 < 7$  and  $2x \geq x-1$ .



11. Solve  $-2x+3 \leq 5$  or  $3x < x+1$ .

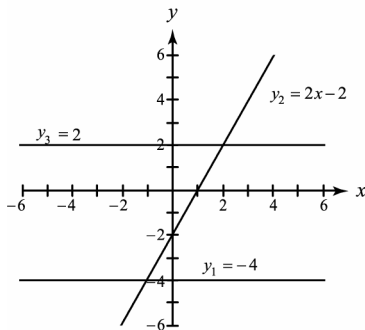


12. Use the table to solve the compound inequality  $-2x \geq 4$  or  $-2x < -2$ . Write your answer in interval notation.

12. \_\_\_\_\_

$x$	-3	-2	-1	0	1	2	3
$-2x$	6	4	2	0	-2	-4	-6

For #13 and #14, use the following figure to solve the equation and inequality.



13. Solve  $y_2 = y_3$ .

13. \_\_\_\_\_

14. Solve  $y_1 < y_2$ . Write your answer in interval notation.

14. \_\_\_\_\_

In #15 and #16, solve the compound inequality and write the solution set in interval notation.

15. Solve  $-3 < 2 + \frac{1}{2}x \leq 1$ .

15. \_\_\_\_\_

16. Solve  $-2 - \frac{1}{3}x \geq -2$  or  $-2 - \frac{1}{3}x < -3$ .

16. \_\_\_\_\_

17. Solve  $|1 - 2x| = 2$ .

17. \_\_\_\_\_

18. Solve  $|2 + 3x| < -5$ . Write your answer in interval notation.

18. \_\_\_\_\_

19. Solve  $|2 + 5x| + 1 \geq 4$ . Write your answer in interval notation.

19. \_\_\_\_\_

20. Solve the formula  $d = \frac{1}{2}gt^2$  for  $g$ .

20. \_\_\_\_\_