

Assignment

Date _____ Period _____

Solve each equation.

1) $6n + 4 = 8n - 2 + n$

- A) {2} B) {1}
C) {-13} D) {-16}

2) $3x + 2 = 2 + 3x$

- A) {-2}
B) { All real numbers. }
C) {1}
D) {-6}

3) $8v = 6v + 5 - 7$

- A) {-1} B) {13}
C) {5} D) {-13}

4) $2n + 3 = -4 + 4n - n$

- A) {-9} B) {-4}
C) {7} D) {-12}

5) $-2b - 6 = -4b - 4$

- A) {-4} B) {-3}
C) {-1} D) {1}

6) $a + 3 = a + 7 - 8a + 12$

- A) No solution. B) {-15}
C) {-5} D) {2}

7) $2n - 14 = 2(n - 5)$

- A) {-3} B) {9}
C) {-12} D) No solution.

8) $-7b - 33 = -6(b + 5)$

- A) {-15} B) No solution.
C) {-2} D) {-3}

9) $-(2 + 7n) = -8n - 6$

- A) {-7}
B) { All real numbers. }
C) {-4}
D) {15}

10) $-6m - 28 = -7(m + 8) + 5m$

- A) {16} B) {3}
C) {7} D) {5}

11) $-(1 - 5m) = 34 - 2m$

- A) {5}
B) {-6}
C) { All real numbers. }
D) {3}

12) $-3 + 7a = 2(a + 1)$

- A) {8} B) {10}
C) {1} D) {16}

13) $12(10n + 3) + 12 = -12(n + 7)$

- A) {12} B) {-20}
C) {-1} D) {-13}

14) $1 + 8x + 1 + 4x = -12(x - 2) + 5(3x - 8)$

- A) {12} B) {17}
C) {-2} D) { All real numbers. }

$$15) -(1 - 5a) = 5a + 15$$

- A) $\{-21\}$ B) $\{11\}$
 C) $\{15\}$ D) No solution.

$$16) 10(6 - x) = 10(x - 7) + 10$$

- A) $\{-20\}$
 B) $\{\text{All real numbers.}\}$
 C) $\{7\}$
 D) $\{6\}$

$$17) 8(1 - 4x) = 5(10 - 5x)$$

- A) $\{\text{All real numbers.}\}$
 B) $\{0\}$
 C) No solution.
 D) $\{-6\}$

$$18) -3(-4n - 11) = -11(n - 3) - 3n$$

- A) $\{-23\}$
 B) $\{\text{All real numbers.}\}$
 C) $\{0\}$
 D) $\{21\}$

$$19) \frac{7}{5}m - m = \frac{1}{15}$$

- A) $\{-\frac{5}{6}\}$ B) $\{0\}$
 C) $\{-\frac{10}{11}\}$ D) $\{\frac{1}{6}\}$

$$20) -2n - n = 3$$

- A) $\{-\frac{10}{9}\}$ B) $\{-\frac{8}{7}\}$
 C) No solution. D) $\{-1\}$

$$21) \frac{3}{2} = x + 1 - \frac{1}{2}$$

- A) $\{\frac{3}{2}\}$ B) $\{-\frac{3}{5}\}$
 C) $\{\frac{3}{4}\}$ D) $\{1\}$

$$22) -10m + 2m = -\frac{50m + 7}{5} - \frac{9}{5} \cdot \frac{3m + 2}{6}$$

$$23) -\frac{1}{7} \cdot \frac{4 + 5x}{4} + \frac{7}{4} \cdot \frac{-11x + 40}{22} = \frac{-11 + 19x}{11} + \frac{49x + 40}{28}$$

$$24) -\frac{17}{11}n - \frac{4}{9}(1 - 8n) = -\frac{3}{4} \cdot \frac{2n + 1}{2}$$

Solve each inequality.

$$25) -28 \leq -4(1 + 2b)$$

- A) $b \leq 0$ B) $b \leq 3$
 C) $b \leq -25$ D) $b \leq -36$

$$26) 5(4 + 7p) > 20$$

- A) $p > 0$ B) $p > -7$
 C) $p < -7$ D) $p > -21$

27) $-72 \geq -8(3n - 6)$

- A) $n \geq -5$
- B) $n \leq 5$
- C) { All real numbers. }
- D) $n \geq 5$

28) $-12 \leq -8 - 4(1 + 4k)$

- A) $k \leq -31$
- B) $k \geq -31$
- C) $k \geq 0$
- D) $k \leq 0$

29) $28 > -7(2 + p)$

- A) $p < -6$
- B) $p < -22$
- C) { All real numbers. }
- D) $p > -6$

30) $6(1 + r) \leq 48$

- A) $r \leq 6$
- B) $r \leq -2$
- C) $r \leq 7$
- D) $r \leq -27$

31) $-6(4 + x) > -16 - 5x$

- A) $x > -8$
- B) $x < -8$
- C) $x > -35$
- D) { All real numbers. }

32) $-5 - 5(1 + 6r) > 34 - 8r$

- A) $r < -30$
- B) $r < -27$
- C) $r > -30$
- D) $r < -2$

33) $35 - 3x > -2(2 - 5x)$

- A) { All real numbers. }
- B) $x > -3$
- C) $x < 3$
- D) $x > 3$

34) $-2(5 + p) \leq 32 + 4p$

- A) $p \geq -7$
- B) $p \leq -37$
- C) $p \geq -15$
- D) $p \leq -15$

35) $-7(7 - 2x) > -31 + 5x$

- A) $x < 2$
- B) $x < -20$
- C) $x > 2$
- D) $x < -35$

36) $3(a - 3) < 11 - 7a$

- A) $a < 0$
- B) $a > -40$
- C) $a > 0$
- D) $a < 2$

37) $-2 \cdot \frac{2x+1}{2} - \frac{3}{4}x > -\frac{43}{10}$

- A) $x < \frac{6}{5}$
- B) $x < -\frac{3}{4}$
- C) $x < \frac{11}{8}$
- D) $x > \frac{6}{5}$

$$38) -\frac{13}{7} \cdot \frac{2x-1}{2} + \frac{1}{3}x \geq \frac{5}{14}$$

A) $x \geq \frac{11}{8}$

B) $x \leq \frac{3}{8}$

C) $x \leq \frac{11}{8}$

D) { All real numbers. }

$$39) -\frac{4}{5} \cdot \frac{10-9b}{6} \geq -\frac{44}{15}$$

A) $b \leq -\frac{4}{3}$

B) $b \leq -\frac{8}{5}$

C) { All real numbers. }

D) $b \geq -\frac{4}{3}$

$$40) -26 < -5 + 3(1 + 8p)$$

$$41) 6k + 7(7k - 6) \leq -42$$

$$42) 20 \geq -4(b - 6)$$

$$43) -3x + 38 \leq -8(x - 8) - 6$$

$$44) -2 + 3x < 5(2x + 1)$$

$$45) 7(1 + a) \leq -3a + 17$$

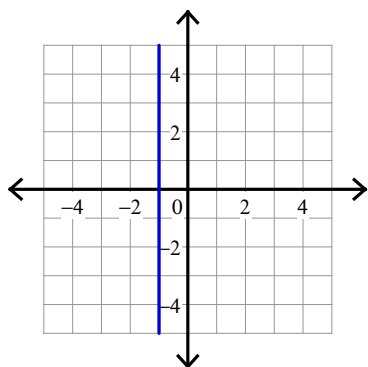
$$46) -\frac{8x+13}{8} > -\frac{5}{8}$$

$$47) \frac{1}{2} \cdot \frac{5-3p}{5} \geq -\frac{1}{10}$$

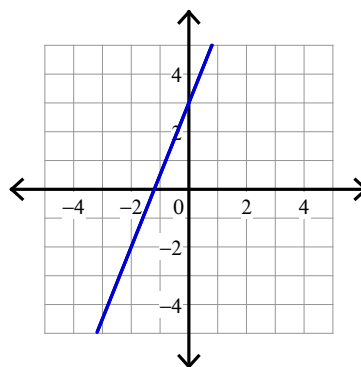
$$48) -\frac{76}{9} < -\frac{4}{3}(1-2r) - 8r$$

Write the slope-intercept form of the equation of each line.

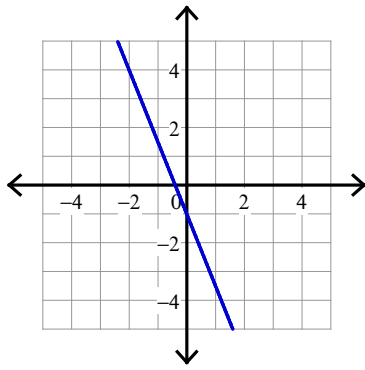
49)



50)



51)



Write the standard form of the equation of each line.

52) $-2 = -2x + y$

53) $x = 8 + 4y$

54) $-15x = -12 + 3y$

Write the standard form of the equation of the line described.

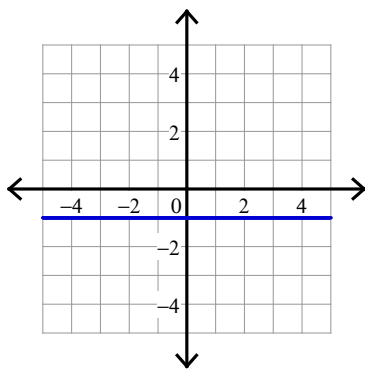
55) through: $(-2, 4)$, perp. to $y = -\frac{2}{3}x + 1$

56) through: $(-3, 1)$, perp. to $y = x - 1$

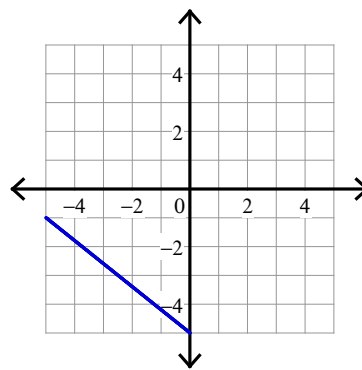
57) through: $(1, -4)$, perp. to $y = \frac{1}{3}x - 3$

Write the slope-intercept form of the equation of each line.

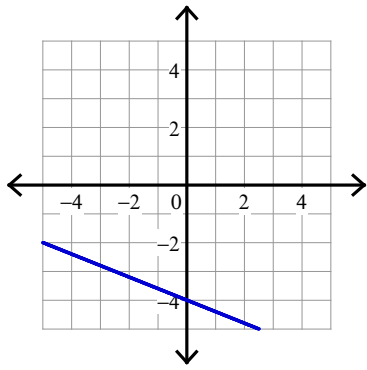
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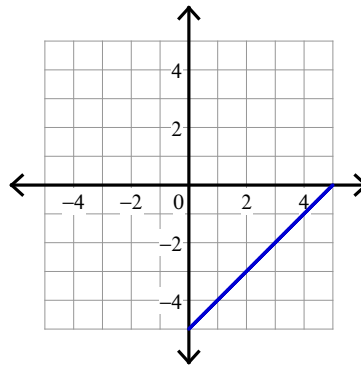
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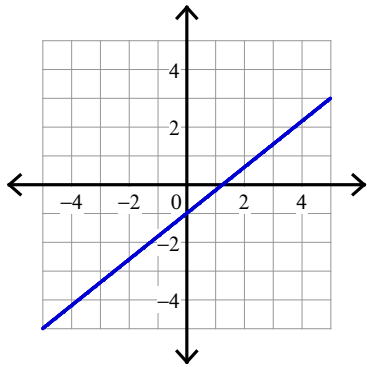
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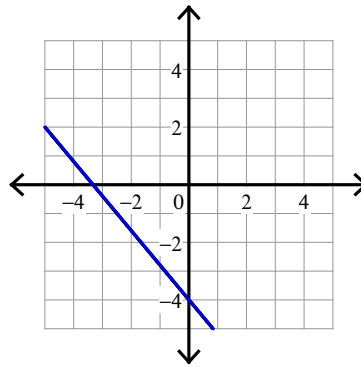
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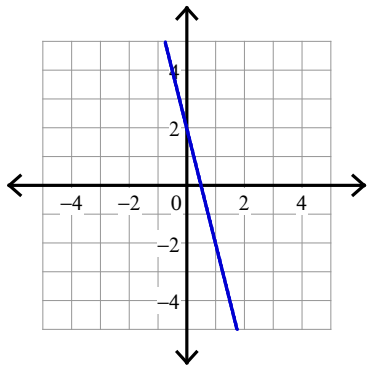
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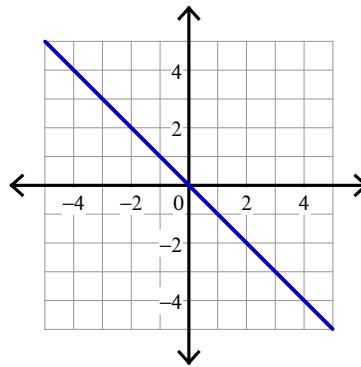
63)



64)



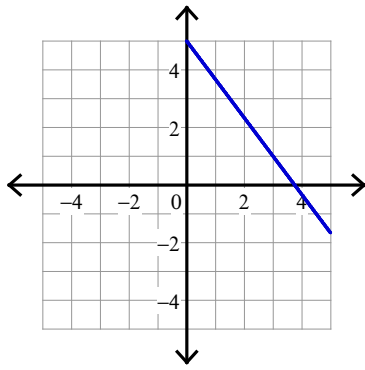
65)



- A) $y = -4x + 2$ B) $y = -2x - 3$
 C) $y = -3x + 2$ D) $y = 2x - 3$

- A) $y = -2x$ B) $y = 2x$
 C) $y = 2$ D) $y = -x$

66)



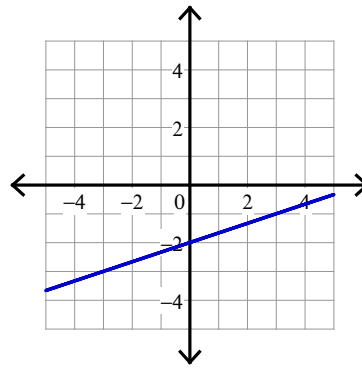
A) $y = 5x - \frac{4}{3}$

B) $y = -\frac{4}{3}x + 5$

C) $y = -5x - \frac{4}{3}$

D) $y = \frac{4}{3}x + 5$

67)



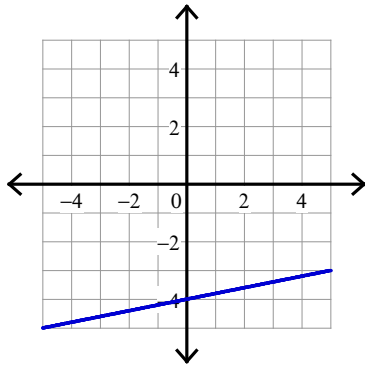
A) $y = -2x + \frac{1}{3}$

B) $y = \frac{2}{3}x + \frac{1}{3}$

C) $y = 2x + \frac{1}{3}$

D) $y = \frac{1}{3}x - 2$

68)



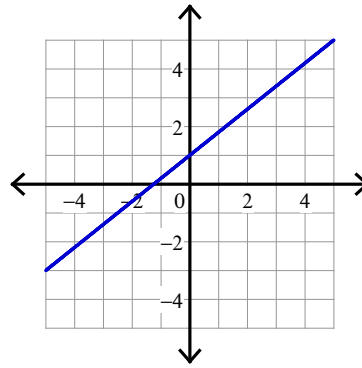
A) $y = -4x + \frac{3}{5}$

B) $y = \frac{1}{5}x - 4$

C) $y = -\frac{3}{5}x - 4$

D) $y = \frac{3}{5}x - 4$

69)



A) $y = -\frac{2}{5}x + 1$

B) $y = \frac{4}{5}x + 1$

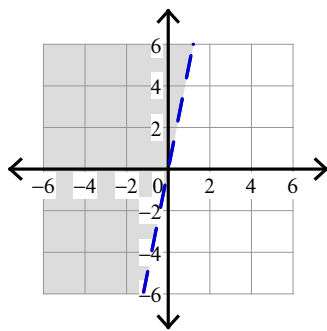
C) $y = \frac{4}{5}x - \frac{2}{5}$

D) $y = x - \frac{2}{5}$

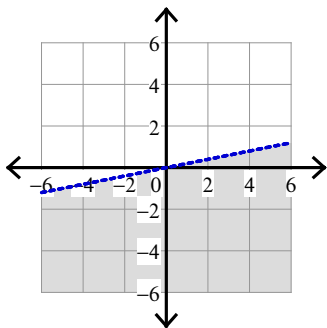
Sketch the graph of each linear inequality.

70) $y < \frac{1}{5}x$

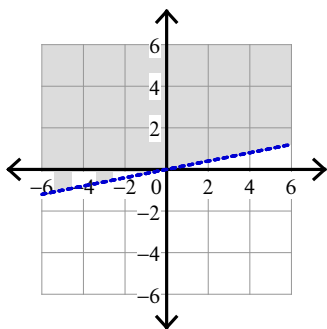
A)



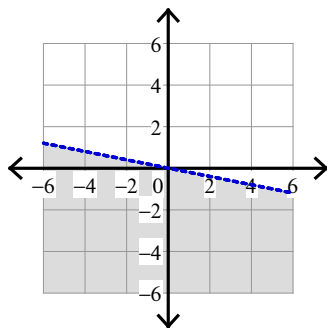
B)



C)

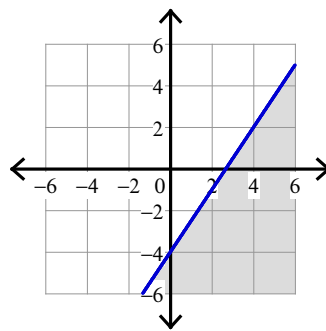


D)

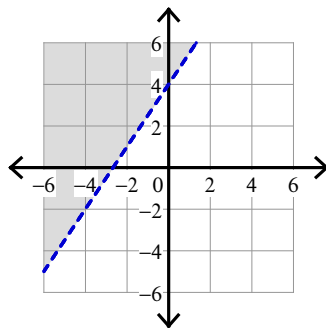


71) $y \leq \frac{3}{2}x - 4$

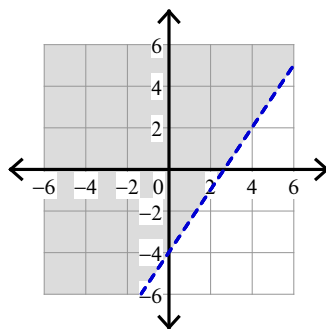
A)



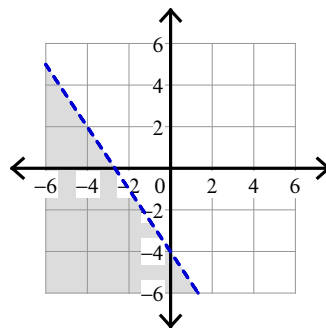
B)



C)

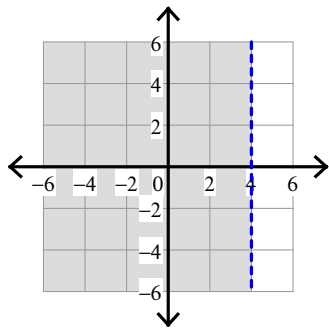


D)

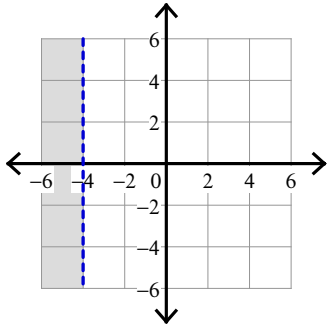


72) $x < -4$

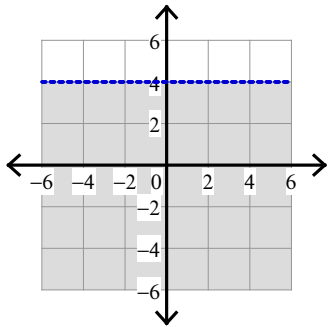
A)



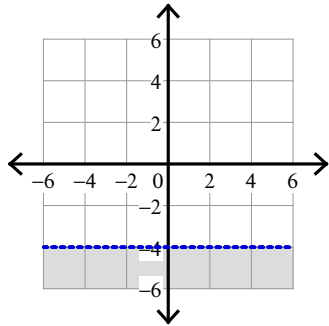
B)



C)

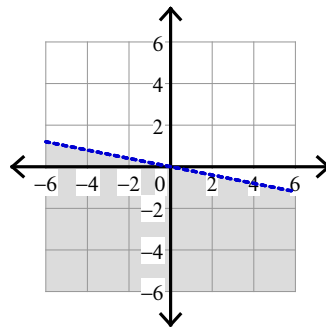


D)

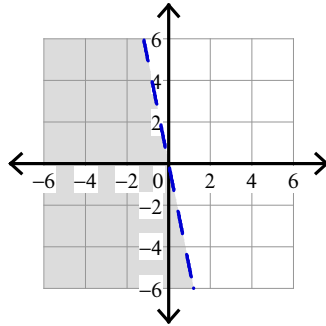


73) $y < -5x$

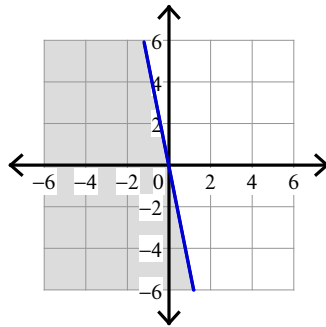
A)



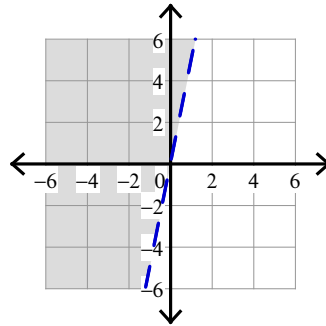
B)



C)

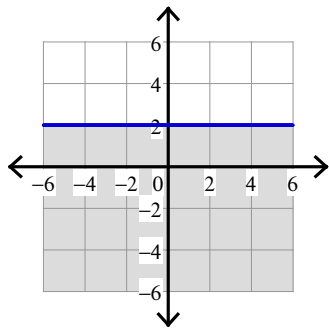


D)

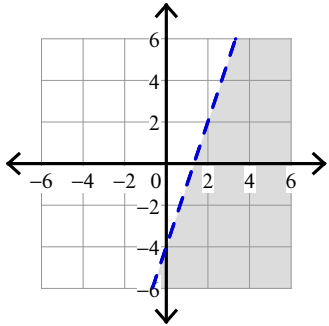


74) $y > 3x - 4$

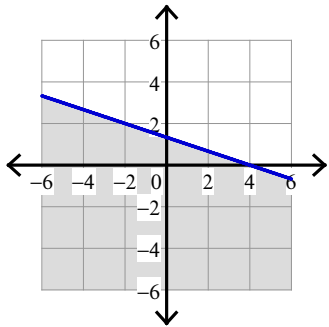
A)



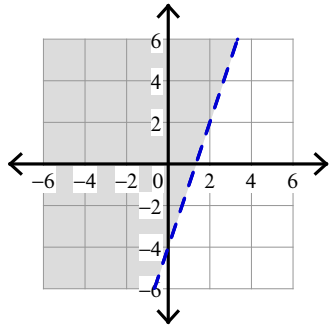
B)



C)

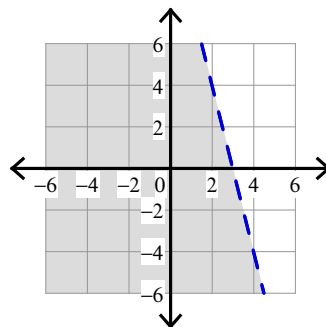


D)

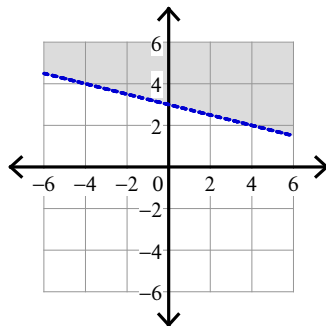


75) $y > -\frac{1}{4}x + 3$

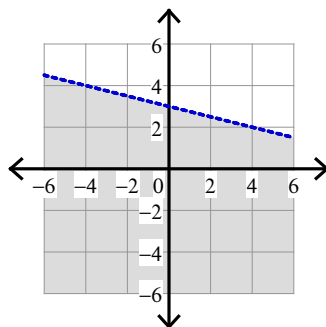
A)



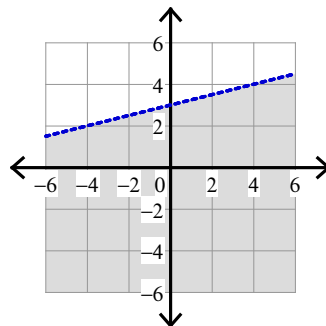
B)



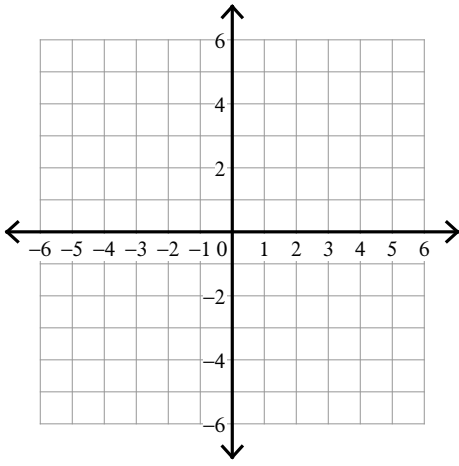
C)



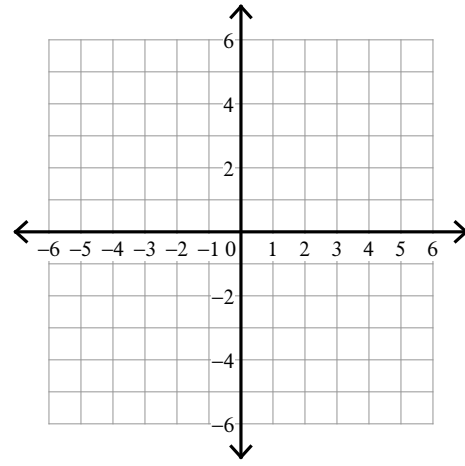
D)



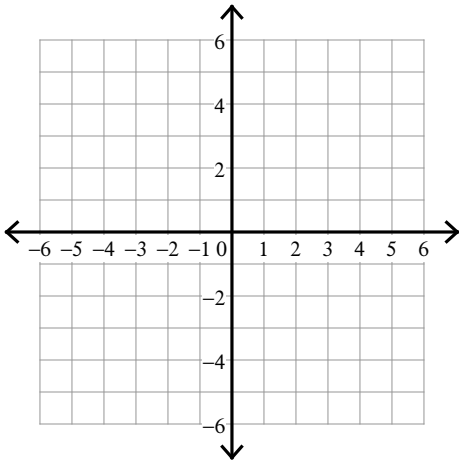
76) $y \geq x - 4$



77) $y \geq 2x$



78) $y \leq -x - 1$



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- A) No solution. B) {-15}
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11) $-(1 - 5m) = 34 - 2m$

- *A) {5}
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- A) {8} B) {10}
 *C) {1} D) {16}

13) $12(10n + 3) + 12 = -12(n + 7)$

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 *C) {-1} D) {-13}

14) $1 + 8x + 1 + 4x = -12(x - 2) + 5(3x - 8)$

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 *C) {-2} D) { All real numbers. }

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$$20) -2n - n = 3$$

- A) $\{-\frac{10}{9}\}$ B) $\{-\frac{8}{7}\}$
 C) No solution. *D) $\{-1\}$

$$21) \frac{3}{2} = x + 1 - \frac{1}{2}$$

- A) $\{\frac{3}{2}\}$ B) $\{-\frac{3}{5}\}$
 C) $\{\frac{3}{4}\}$ *D) $\{1\}$

$$22) -10m + 2m = -\frac{50m + 7}{5} - \frac{9}{5} \cdot \frac{3m + 2}{6} \quad \left\{ -\frac{20}{29} \right\}$$

$$23) -\frac{1}{7} \cdot \frac{4 + 5x}{4} + \frac{7}{4} \cdot \frac{-11x + 40}{22} = \frac{-11 + 19x}{11} + \frac{49x + 40}{28} \quad \left\{ \frac{1608}{2791} \right\}$$

$$24) -\frac{17}{11}n - \frac{4}{9}(1 - 8n) = -\frac{3}{4} \cdot \frac{2n + 1}{2} \quad \left\{ \frac{55}{2186} \right\}$$

Solve each inequality.

$$25) -28 \leq -4(1 + 2b)$$

- A) $b \leq 0$ *B) $b \leq 3$
 C) $b \leq -25$ D) $b \leq -36$

$$26) 5(4 + 7p) > 20$$

- *A) $p > 0$ B) $p > -7$
 C) $p < -7$ D) $p > -21$

27) $-72 \geq -8(3n - 6)$

- A) $n \geq -5$
- B) $n \leq 5$
- C) { All real numbers. }
- *D) $n \geq 5$

28) $-12 \leq -8 - 4(1 + 4k)$

- A) $k \leq -31$
- B) $k \geq -31$
- C) $k \geq 0$
- *D) $k \leq 0$

29) $28 > -7(2 + p)$

- A) $p < -6$
- B) $p < -22$
- C) { All real numbers. }
- *D) $p > -6$

30) $6(1 + r) \leq 48$

- A) $r \leq 6$
- B) $r \leq -2$
- *C) $r \leq 7$
- D) $r \leq -27$

31) $-6(4 + x) > -16 - 5x$

- A) $x > -8$
- *B) $x < -8$
- C) $x > -35$
- D) { All real numbers. }

32) $-5 - 5(1 + 6r) > 34 - 8r$

- A) $r < -30$
- B) $r < -27$
- C) $r > -30$
- *D) $r < -2$

33) $35 - 3x > -2(2 - 5x)$

- A) { All real numbers. }
- B) $x > -3$
- *C) $x < 3$
- D) $x > 3$

34) $-2(5 + p) \leq 32 + 4p$

- *A) $p \geq -7$
- B) $p \leq -37$
- C) $p \geq -15$
- D) $p \leq -15$

35) $-7(7 - 2x) > -31 + 5x$

- A) $x < 2$
- B) $x < -20$
- *C) $x > 2$
- D) $x < -35$

36) $3(a - 3) < 11 - 7a$

- A) $a < 0$
- B) $a > -40$
- C) $a > 0$
- *D) $a < 2$

37) $-2 \cdot \frac{2x+1}{2} - \frac{3}{4}x > -\frac{43}{10}$

- *A) $x < \frac{6}{5}$
- B) $x < -\frac{3}{4}$
- C) $x < \frac{11}{8}$
- D) $x > \frac{6}{5}$

$$38) -\frac{13}{7} \cdot \frac{2x-1}{2} + \frac{1}{3}x \geq \frac{5}{14}$$

A) $x \geq \frac{11}{8}$

*B) $x \leq \frac{3}{8}$

C) $x \leq \frac{11}{8}$

D) { All real numbers. }

$$39) -\frac{4}{5} \cdot \frac{10-9b}{6} \geq -\frac{44}{15}$$

A) $b \leq -\frac{4}{3}$

B) $b \leq -\frac{8}{5}$

C) { All real numbers. }

*D) $b \geq -\frac{4}{3}$

$$40) -26 < -5 + 3(1 + 8p)$$

$p > -1$

$$41) 6k + 7(7k - 6) \leq -42$$

$k \leq 0$

$$42) 20 \geq -4(b - 6)$$

$b \geq 1$

$$43) -3x + 38 \leq -8(x - 8) - 6$$

$x \leq 4$

$$44) -2 + 3x < 5(2x + 1)$$

$x > -1$

$$45) 7(1 + a) \leq -3a + 17$$

$a \leq 1$

$$46) -\frac{8x+13}{8} > -\frac{5}{8}$$

$x < -1$

$$47) \frac{1}{2} \cdot \frac{5-3p}{5} \geq -\frac{1}{10}$$

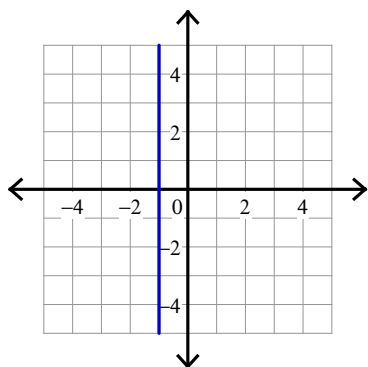
$p \leq 2$

$$48) -\frac{76}{9} < -\frac{4}{3}(1 - 2r) - 8r$$

$r < \frac{4}{3}$

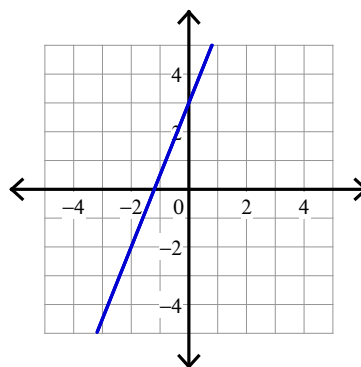
Write the slope-intercept form of the equation of each line.

49)



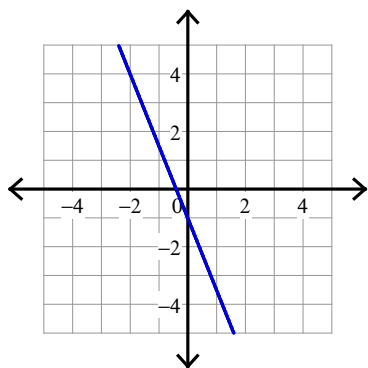
$x = -1$

50)



$y = \frac{5}{2}x + 3$

51)



$$y = -\frac{5}{2}x - 1$$

Write the standard form of the equation of each line.

52) $-2 = -2x + y$

$$2x - y = 2$$

53) $x = 8 + 4y$

$$x - 4y = 8$$

54) $-15x = -12 + 3y$

$$5x + y = 4$$

Write the standard form of the equation of the line described.

55) through: $(-2, 4)$, perp. to $y = -\frac{2}{3}x + 1$

$$3x - 2y = -14$$

56) through: $(-3, 1)$, perp. to $y = x - 1$

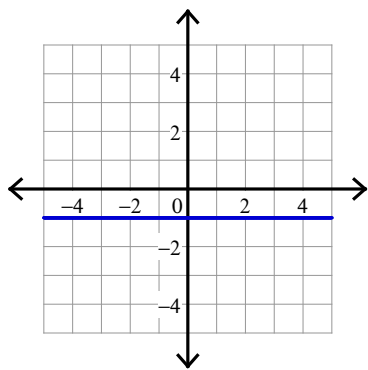
$$x + y = -2$$

57) through: $(1, -4)$, perp. to $y = \frac{1}{3}x - 3$

$$3x + y = -1$$

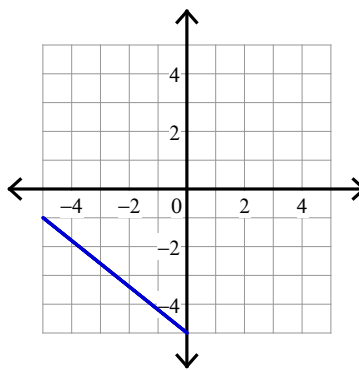
Write the slope-intercept form of the equation of each line.

58)



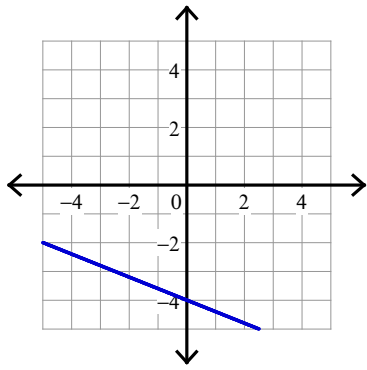
$$y = -1$$

59)



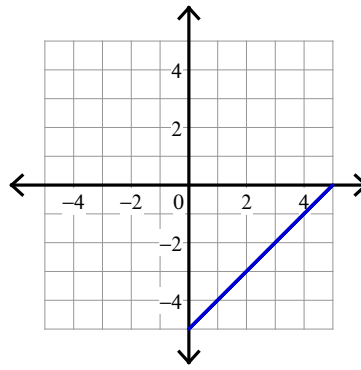
$$y = -\frac{4}{5}x - 5$$

60)



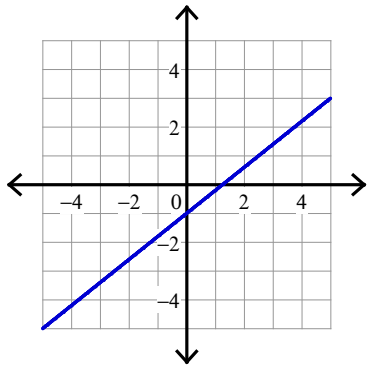
$$y = -\frac{2}{5}x - 4$$

61)



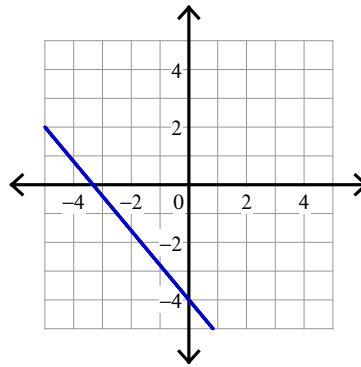
$$y = x - 5$$

62)



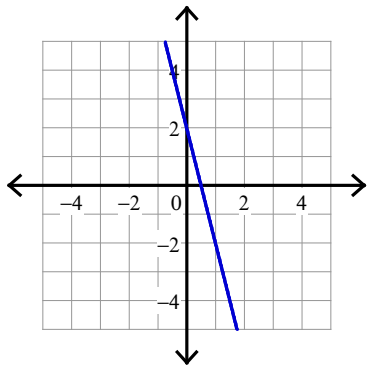
$$y = \frac{4}{5}x - 1$$

63)



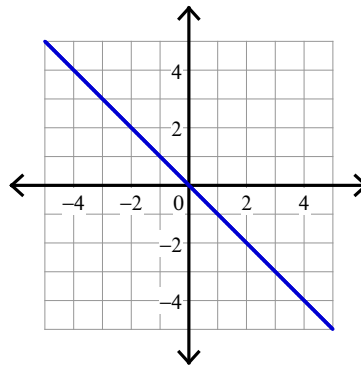
$$y = -\frac{6}{5}x - 4$$

64)



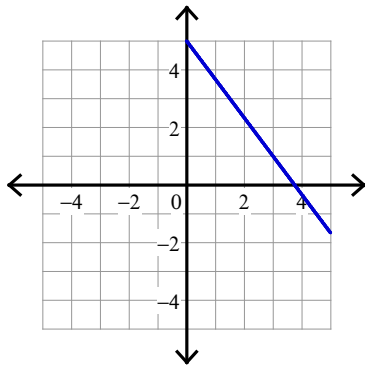
- *A) $y = -4x + 2$ B) $y = -2x - 3$
 C) $y = -3x + 2$ D) $y = 2x - 3$

65)



- A) $y = -2x$ B) $y = 2x$
 C) $y = 2$ *D) $y = -x$

66)



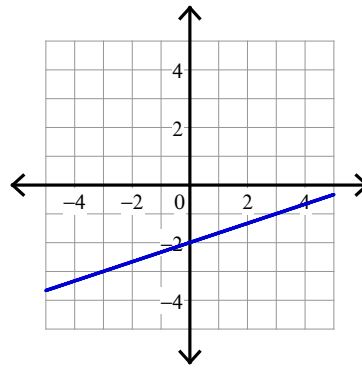
A) $y = 5x - \frac{4}{3}$

*B) $y = -\frac{4}{3}x + 5$

C) $y = -5x - \frac{4}{3}$

D) $y = \frac{4}{3}x + 5$

67)



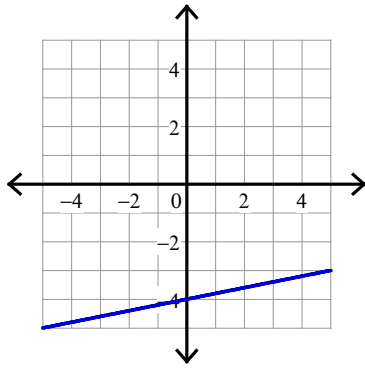
A) $y = -2x + \frac{1}{3}$

B) $y = \frac{2}{3}x + \frac{1}{3}$

C) $y = 2x + \frac{1}{3}$

*D) $y = \frac{1}{3}x - 2$

68)



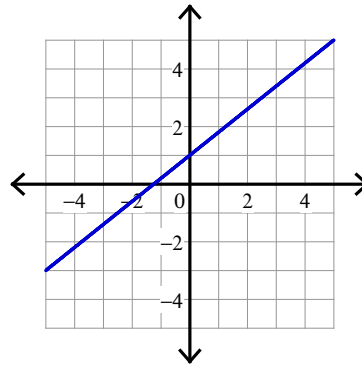
A) $y = -4x + \frac{3}{5}$

*B) $y = \frac{1}{5}x - 4$

C) $y = -\frac{3}{5}x - 4$

D) $y = \frac{3}{5}x - 4$

69)



A) $y = -\frac{2}{5}x + 1$

*B) $y = \frac{4}{5}x + 1$

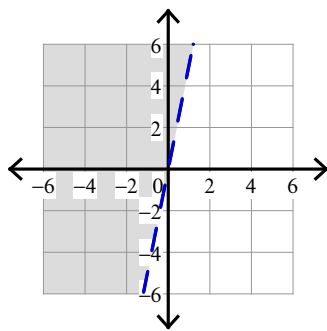
C) $y = \frac{4}{5}x - \frac{2}{5}$

D) $y = x - \frac{2}{5}$

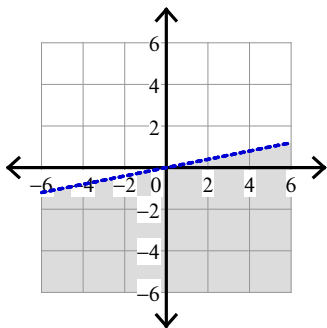
Sketch the graph of each linear inequality.

70) $y < \frac{1}{5}x$

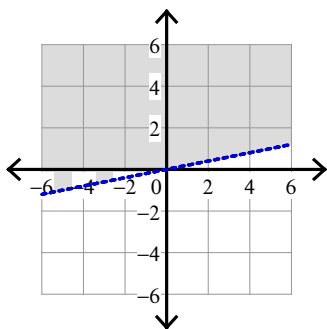
A)



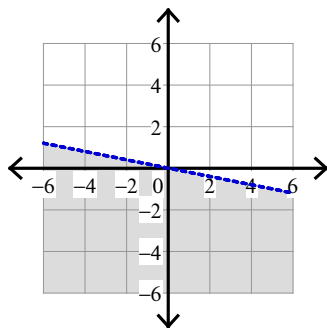
*B)



C)

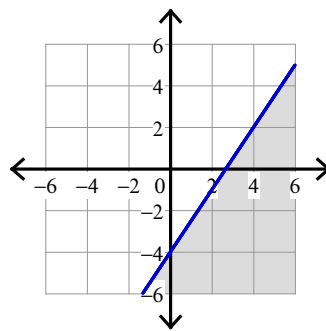


D)

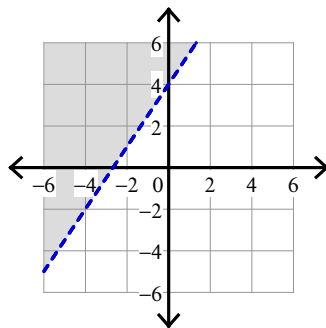


71) $y \leq \frac{3}{2}x - 4$

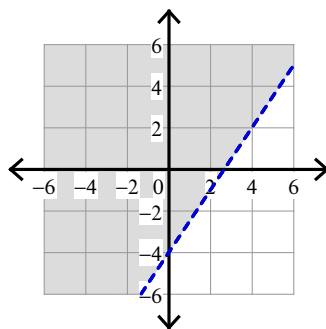
*A)



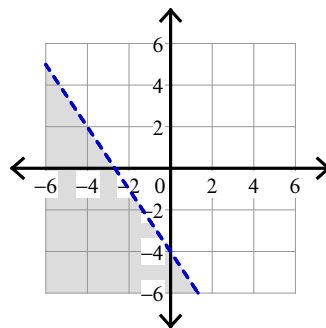
B)



C)

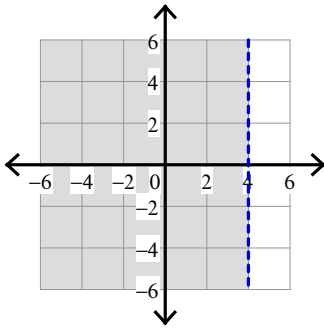


D)

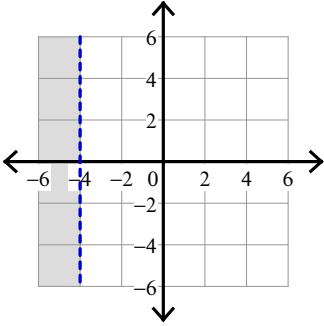


72) $x < -4$

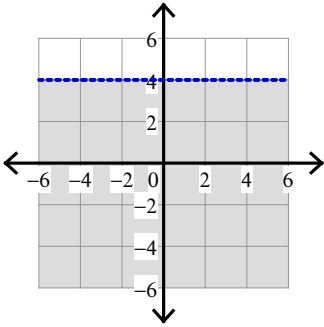
A)



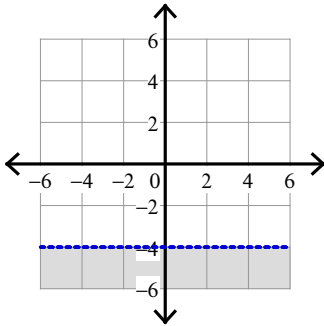
*B)



C)

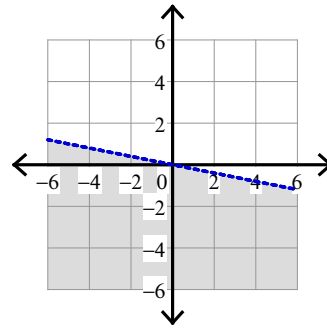


D)

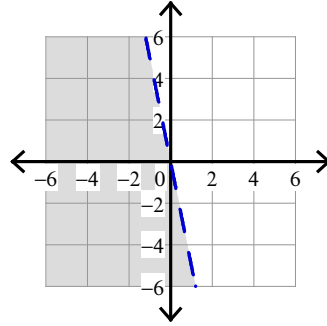


73) $y < -5x$

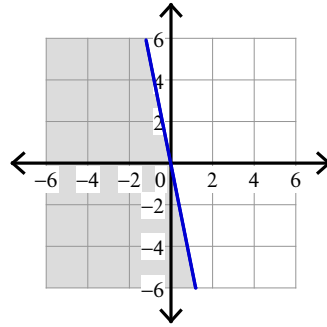
A)



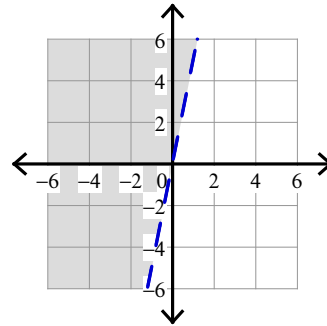
*B)



C)

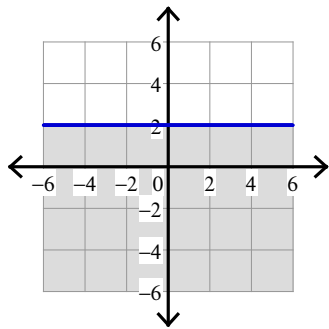


D)

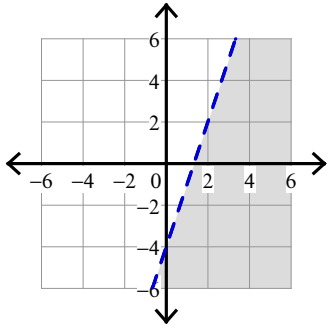


74) $y > 3x - 4$

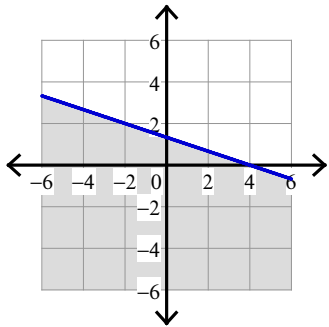
A)



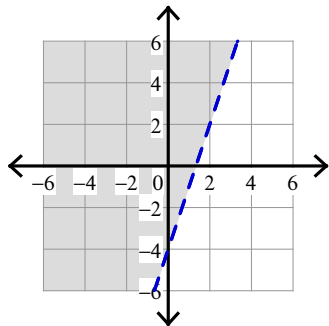
B)



C)

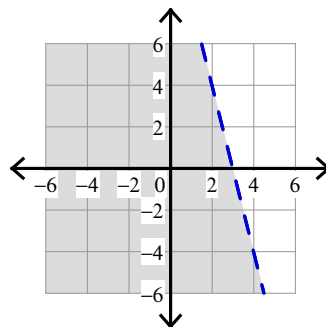


*D)

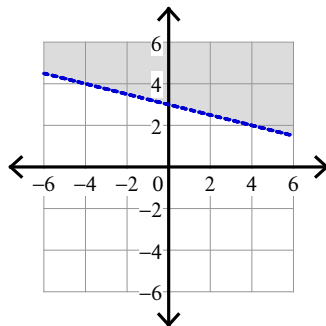


75) $y > -\frac{1}{4}x + 3$

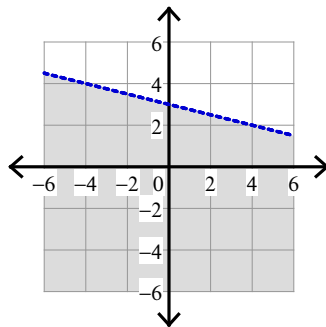
A)



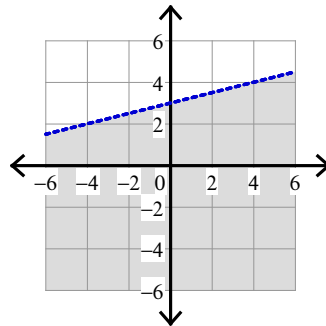
*B)



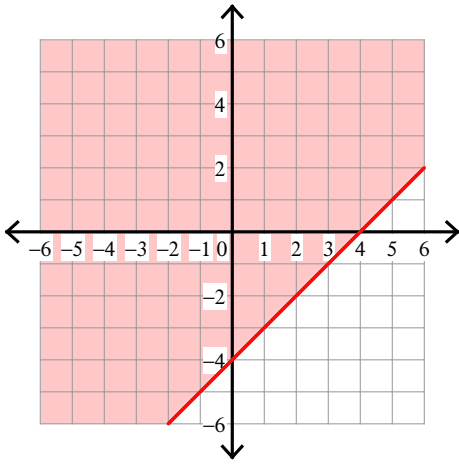
C)



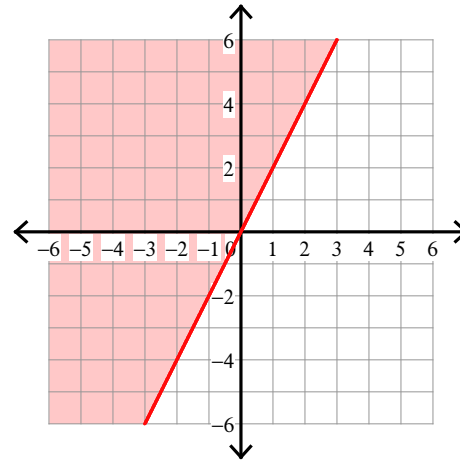
D)



76) $y \geq x - 4$



77) $y \geq 2x$



78) $y \leq -x - 1$

