

Evaluate each expression.

1) $(-5) - 7 + 6 \times (-2)$

2) $\frac{9 - (-3)}{-2} + 9$

3) $(-3) \times \left(\frac{-5}{-1}\right) - 9$

Evaluate each using the values given.

4) $2(x - (y - yz))$; use $x = -3$, $y = -5$, and $z = 10$

5) $\frac{r - q}{2} - (-4)^2$; use $q = 1$, and $r = -1$

Evaluate each expression.

6) $90 + 36 - 6 - (-91)$

7) $96 - 26 + 89 - (-81)$

8) $93 - (-69) + (-50) - 12$

Find each product.

9) $(2)(6)(-4)$

10) $(-3)(5)(6)$

Find each quotient.

11) $5\frac{3}{8} \div \frac{7}{4}$

12) $-3\frac{3}{10} \div \frac{7}{4}$

13) $-3 \div \frac{3}{5}$

Simplify each expression.

14) $-7(2r + 6) - 5$

15) $6m + 8(2 + 6m)$

16) $-8(x - 8) - 6(1 - 3x)$

17) $8n(5n + 5) + 6(n + 5)$

Solve each equation.

18) $30 - x = 16$

19) $-20 = b - (-3)$

20) $v - (-22) = 18$

21) $5200 = 80n$

22) $495 = 55a$

23) $\frac{k + 5}{9} = -1$

24) $\frac{-6 + p}{28} = -1$

25) $\frac{-9 + x}{-2} = 16$

26) $-1 + 15m = 314$

27) $-13n - 16 = 283$

28) $1 - 6r - 2r = 9$

29) $6x - 5 + 5 = 12$

30) $19 - 5n = 6(1 - 3n)$

31) $38 - 8b = 3(b - 2)$

32) $9(x + 12) - x = -(12 + 12x)$

33) $5(7 - 6r) - 9 = -6(1 + 5r) - 4r$

34) $|a + 6| = 4$

35) $\left|\frac{n}{4}\right| = 2$

36) $|-4 - 6v| = 8$

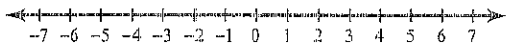
37) $|x + 7| = 2$

38) $1 - |8 + 7x| = -70$

39) $-2|5n + 6| = -82$

Draw a graph for each inequality.

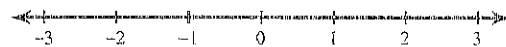
40) $v > 1$



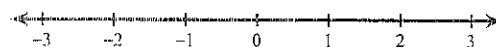
41) $x > 4$



42) $-\frac{1}{2} < -b$

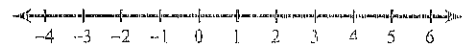


43) $-\frac{1}{2} \leq n$

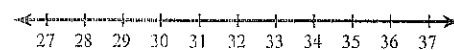


Solve each inequality and graph its solution.

44) $r + 8 \leq 11$



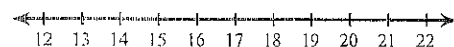
45) $\frac{m}{7} \leq 5$



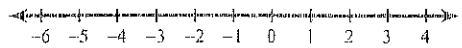
46) $n + (-8) > -32$



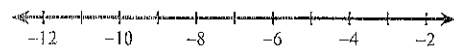
47) $x + 1 < 19$



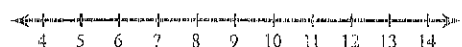
48) $-3(-3 + b) < 15$



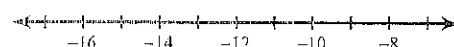
49) $3 + 4v < -33$



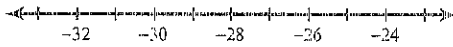
50) $-3 + \frac{x}{9} < -2$



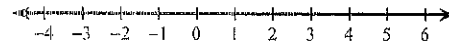
51) $\frac{n}{10} - 6 \leq -7$



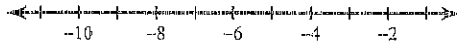
$$52) \frac{a}{26} + 11 < 10$$



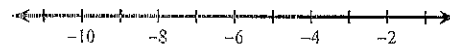
$$53) -18 + 5n > -7(-4n - 4)$$



$$54) -7(x - 2) + 6x \geq -6 - 5x$$



$$55) -12 - 2x > 7(x + 6)$$



Solve each compound inequality and graph its solution.

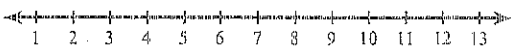
$$56) 11 + 8n < -37 \text{ or } 5n + 12 > 67$$



$$57) 9 + 6m < -63 \text{ or } 8 + 11m > 74$$

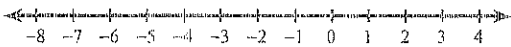


$$58) 3r + 2 < 35 \text{ and } -6r + 4 < -14$$



Solve each inequality and graph its solution.

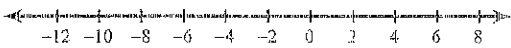
$$59) |-4n| > 4$$



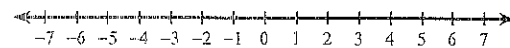
$$60) |x - 6| \leq 3$$



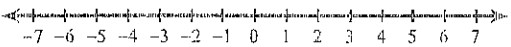
$$61) |3b + 6| > 18$$



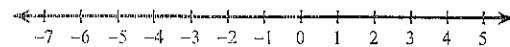
$$62) |2 + 3v| \geq -19$$



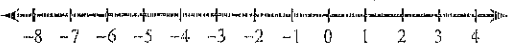
$$63) |8x - 3| \geq -91$$



$$64) 7 + |-10n - 3| \leq -96$$



$$65) |7a - 4| - 2 < 16$$



Solve each proportion.

$$66) \frac{9}{10} = \frac{x}{7}$$

$$67) \frac{12}{10} = -\frac{9}{v}$$

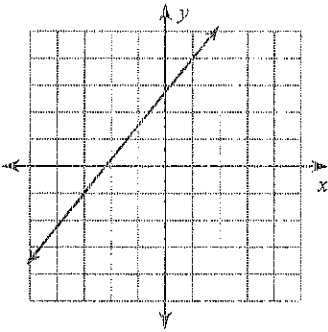
$$68) \frac{x - 4}{8} = \frac{x - 6}{6}$$

$$69) \frac{3}{12} = \frac{n + 1}{n - 10}$$

Find the slope of each line.

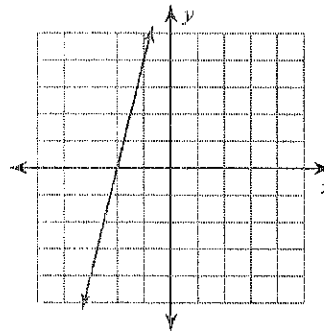
70) $y = -2x + 5$

72)



71) $y = 6x + 5$

73)



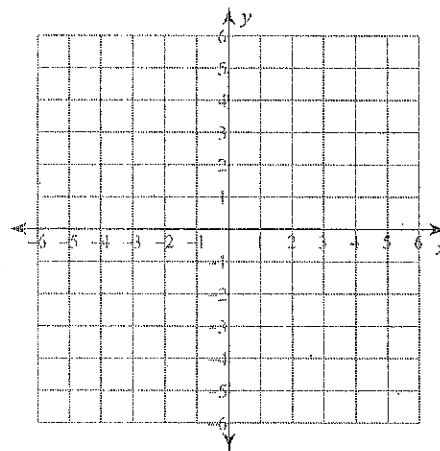
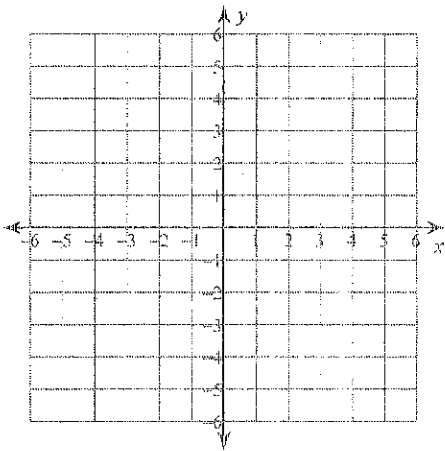
Find the slope of a line perpendicular to each given line.

74) $2x + y = -1$

Sketch the graph of each line.

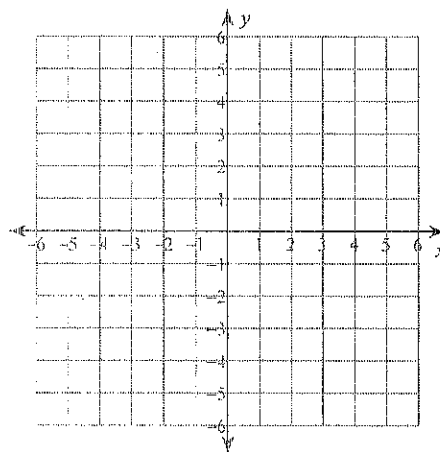
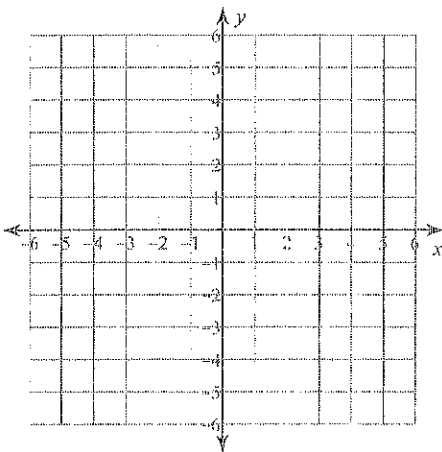
75) x-intercept = -5 , y-intercept = -1

76) x-intercept = 3 , y-intercept = -3

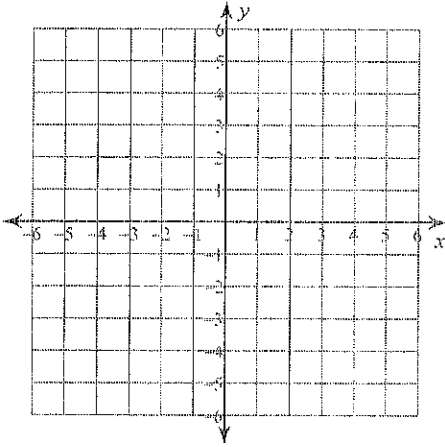


77) $y = 2$

78) $y = 1$



79) $-8 + 2y = -2x$



Write the slope-intercept form of the equation of each line given the slope and y-intercept.

80) Slope = -7 , y-intercept = -5

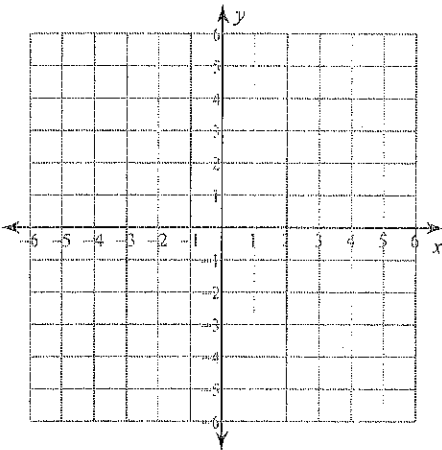
Write the slope-intercept form of the equation of the line through the given point with the given slope.

81) through: $(-5, 2)$, slope = $\frac{2}{5}$

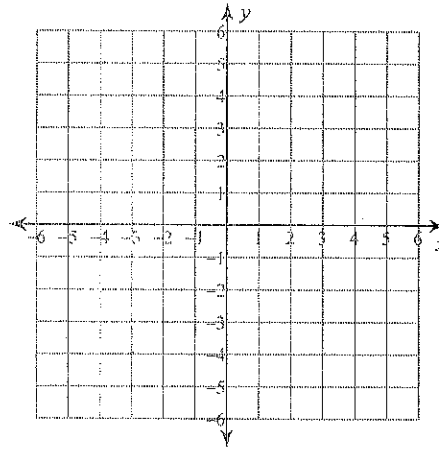
82) through: $(-1, -5)$, slope = 7

Sketch the graph of each linear inequality.

83) $y > \frac{3}{5}x + 2$



84) $2x - y \geq -3$



Solve each system by graphing.

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

$y = -x - 3$

86) $y = -4x - 4$
 $y = -x + 2$

Solve each system by elimination.

87) $x + 6y = -7$

$5x - 6y = 1$

88) $-2x + 8y = 4$

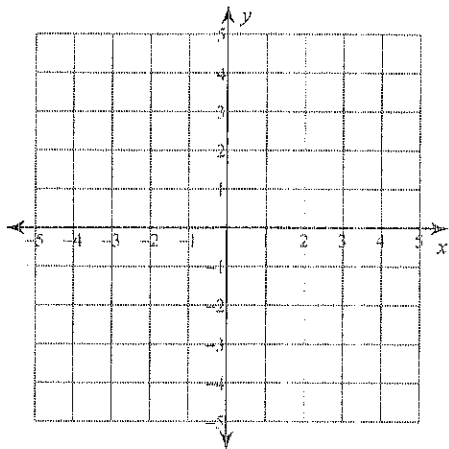
$6x + 16y = 28$

Solve each system by substitution.

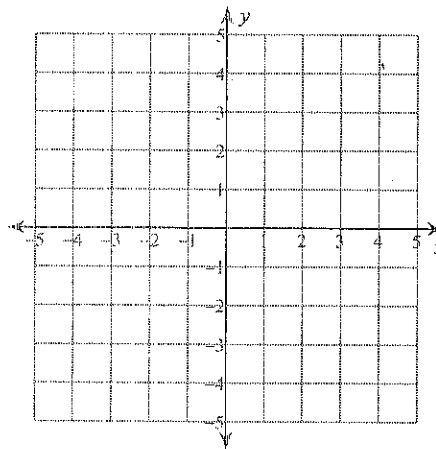
$$\begin{aligned} 89) \quad & -x + y = -2 \\ & 5x - 7y = 2 \end{aligned}$$

Sketch the solution to each system of inequalities.

$$\begin{aligned} 90) \quad & y \leq x - 3 \\ & y < -2x + 3 \end{aligned}$$



$$\begin{aligned} 91) \quad & y \geq 4x - 3 \\ & y > 1 \end{aligned}$$



Simplify. Your answer should contain only positive exponents.

$$92) \quad 3b^2 \cdot b$$

$$93) \quad 2m \cdot -2m^5 \cdot (-m^2n^{-4})^0$$

$$94) \quad (x^{-2}y^5)^3 \cdot x^2y^{-3}$$

$$95) \quad \frac{2u^2v^{-1}}{-2u^{-4}v^{-2} \cdot (2v)^3}$$

$$96) \quad \frac{x^3y^3 \cdot x^{-1}}{-x^3y^4 \cdot (-2xy^4)^3}$$

Write each number in standard notation.

$$97) \quad 9.86 \times 10^{-2}$$

$$98) \quad 7.8 \times 10^2$$

Write each number in scientific notation.

$$99) \quad 6100000$$

$$100) \quad 0.00083$$