Pre-Algebra   Name_____

Pre Test
Evaluate each expression.

1) $7 - (-4)$

2) $(-7) - 7$

3) $(-3) - (-5)$

4) $(-8) + (-1)$

5) $(-5) - (-5) + 3$

6) $6 + (-6) - 3$

7) $(-7) - 4 - 6 - (-6)$

8) $(-4) - (-8) - 6 - (-6)$

Find each product.

9) -3×10

10) -5×-3

11) 5×-6

12) 0×-3

13) $2 \times -7 \times 7$

14) $-7 \times -4 \times -6$

15) $-4 \times 5 \times 0 \times 3$

16) $2 \times -7 \times 0 \times 10$

Evaluate each expression.

17) $2 + 3 + 4 - 6$

18) $4 + 6 - 2 - 2$

19) $(-3)^3 - 3 + 10 \div -2$

20) $5 - 5 \times 2 - -4 - 6$

21) $5 \times 18 \div 6 \times 3 - 15 \div 3$

22) $(6 + 1)(5 + 4 - 2^3)$

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Evaluate each using the values given.

23) $y + x + 4x$; use $x = 2$, and $y = -2$

24) $yx \div 6 + y$; use $x = 3$, and $y = -2$

25) $4b - (a - b)$; use $a = 2$, and $b = 3$

26) $q^2 - p \div 5$; use $p = -5$, and $q = 6$

Simplify each expression.

27) $3(1 + 3x)$

28) $2(n + 6)$

29) $-3 + 3(2m + 2)$

30) $7(5 + 2r) + 9r$

31) $-8(3 + 5x) + 4(8x + 1)$

32) $-3(-9n + 7) + 8(6n - 7)$

33) $(6b^3 + 6b^2) - (7b^3 - 4b + 8b^2)$

34) $(3v^2 - 7) - (6v^3 - 8v^2 - 4)$

35) $(3m^4 + 6m^3) - (6m^4 - 2m^3 - 7m^2) - (m^3 + 6m^2)$

36) $(6r^3 + 8r^4) - (6r^3 - 7 - 5r^4) + (6r^4 - 8r^3)$

Solve each equation.

37) $-21 = -5b - 6$

38) $-87 = -7k + 4$

39) $\dfrac{p-1}{4} = -2$

40) $\dfrac{x}{3} - 2 = -7$

41) $-5r - 7 = 73$

42) $-7 = -5 + \dfrac{m}{10}$

Solve each equation (Multistep)

43) $-364 = -7(7r + 3)$

44) $172 = 7(6x + 4) - 6x$

45) $109 = 7 + 3(4n + 6)$

46) $-258 = -6(6b + 7)$

47) $112 = -8(1 + 5v)$

48) $-175 = -7(1 - 4x)$

Solve each equation (variable on both sides)

49) $-5 - 2k = -7k + k - 1$

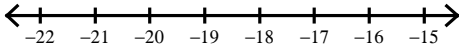50) $1 - 3x - 5 = 6x + 5$

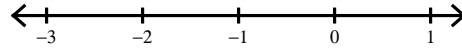51) $-5x - 8 = 2x - 6 - 8 - 15$

52) $-5n - 6n = -12 - 7n - 6n$

53) $-(1 - m) = 2(m + 2) - 5$

54) $-5p + 6(2p - 4) = -8 + 5(4 + 2p)$

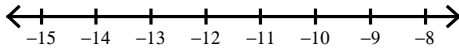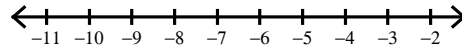**Solve each inequality and graph its solution.**

55) $11 \leq -x - 6$

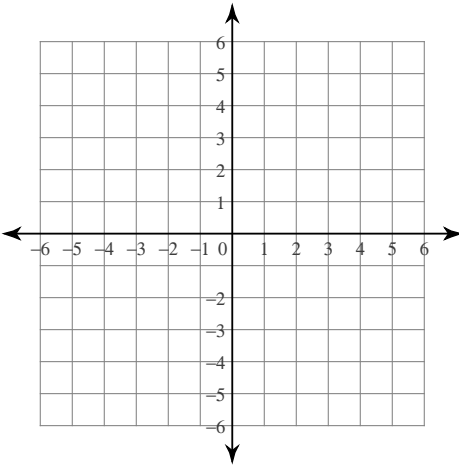56) $-12 > -8 + 4b$

57) $-1 + 8n \leq -81$
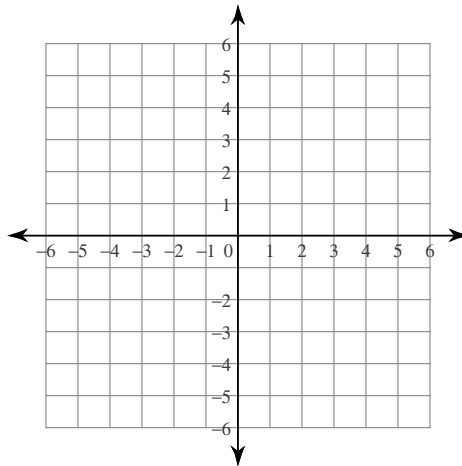

58) $-3 \geq -1 + \dfrac{b}{3}$

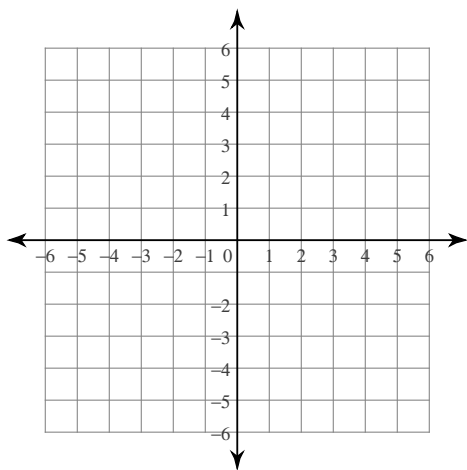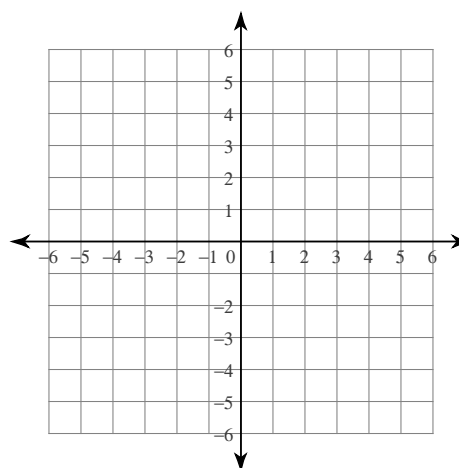**Sketch the graph of each line.**

59) $y = -2x + 3$

60) $y = \dfrac{1}{2}x + 1$
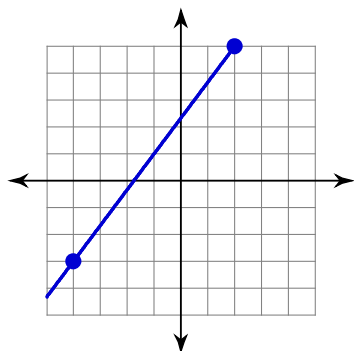
61) $y = -5x + 3$

62) $y = -\dfrac{2}{3}x + 2$

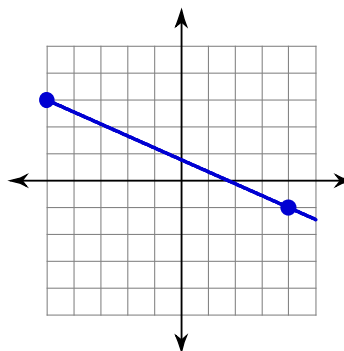**Find the slope of each line.**

63)

64)

Find the slope of the line through each pair of points.
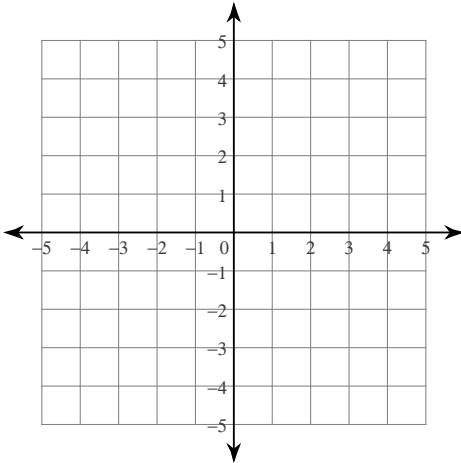
65) $(-18, -9), (-14, -8)$

66) $(3, 13), (10, 8)$
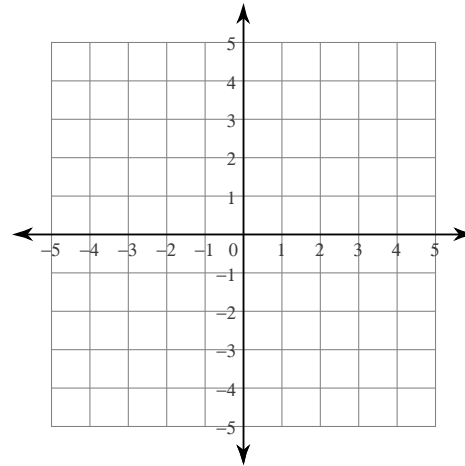
Find the slope of each line.

67) $y = 2x - 2$

68) $y = \dfrac{2}{5}x - 3$

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Solve each system by graphing.

69) $y = x + 2$
$\ y = -x + 4$

70) $y = \dfrac{1}{3}x + 2$
$\ y = 2x - 3$

Solve each system by substitution.

71) $7x + 3y = 13$
$\ y = 2x$

72) $y = -8$
$\ 6x - 6y = 6$

73) $-8x - 4y = 20$
$\ y = -3x$

74) $y = 3$
$\ -2x - 4y = -6$

75) A farmhouse shelters 16 animals. Some are cows and some are geese. Altogether there are 52 legs. How many of each animal are there?

76) Shayna bought 8 shirts for a total of $42. Tee shirts cost $9 and long sleeve shirts cost $4. How many of each type of shirt did she buy?

Name_____

Pre Test

Evaluate each expression.

1) $7 - (-4)$

   11

2) $(-7) - 7$

   −14

3) $(-3) - (-5)$

   2

4) $(-8) + (-1)$

   −9

5) $(-5) - (-5) + 3$

   3

6) $6 + (-6) - 3$

   −3

7) $(-7) - 4 - 6 - (-6)$

   −11

8) $(-4) - (-8) - 6 - (-6)$

   4

Find each product.

9) -3×10

   −30

10) -5×-3

   15

11) 5×-6

   −30

12) 0×-3

   0

13) $2 \times -7 \times 7$

   −98

14) $-7 \times -4 \times -6$

   −168

15) $-4 \times 5 \times 0 \times 3$

   0

16) $2 \times -7 \times 0 \times 10$

   0

Evaluate each expression.

17) $2 + 3 + 4 - 6$

   3

18) $4 + 6 - 2 - 2$

   6

19) $(-3)^3 - 3 + 10 \div -2$

   −35

20) $5 - 5 \times 2 - -4 - 6$

   −7

21) $5 \times 18 \div 6 \times 3 - 15 \div 3$

   40

22) $(6 + 1)(5 + 4 - 2^3)$

   7

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Evaluate each using the values given.

23) $y + x + 4x$; use $x = 2$, and $y = -2$

8

24) $yx \div 6 + y$; use $x = 3$, and $y = -2$

−3

25) $4b - (a - b)$; use $a = 2$, and $b = 3$

13

26) $q^2 - p \div 5$; use $p = -5$, and $q = 6$

37

Simplify each expression.

27) $3(1 + 3x)$

$3 + 9x$

28) $2(n + 6)$

$2n + 12$

29) $-3 + 3(2m + 2)$

$3 + 6m$

30) $7(5 + 2r) + 9r$

$35 + 23r$

31) $-8(3 + 5x) + 4(8x + 1)$

$-20 - 8x$

32) $-3(-9n + 7) + 8(6n - 7)$

$75n - 77$

33) $(6b^3 + 6b^2) - (7b^3 - 4b + 8b^2)$

$-b^3 - 2b^2 + 4b$

34) $(3v^2 - 7) - (6v^3 - 8v^2 - 4)$

$-6v^3 + 11v^2 - 3$

35) $(3m^4 + 6m^3) - (6m^4 - 2m^3 - 7m^2) - (m^3 + 6m^2)$

$-3m^4 + 7m^3 + m^2$

36) $(6r^3 + 8r^4) - (6r^3 - 7 - 5r^4) + (6r^4 - 8r^3)$

$19r^4 - 8r^3 + 7$

Solve each equation.

37) $-21 = -5b - 6$

$\{3\}$

38) $-87 = -7k + 4$

$\{13\}$

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39) $\dfrac{p-1}{4} = -2$

$\{-7\}$

40) $\dfrac{x}{3} - 2 = -7$

$\{-15\}$

41) $-5r - 7 = 73$

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42) $-7 = -5 + \dfrac{m}{10}$

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Solve each equation (Multistep)

43) $-364 = -7(7r + 3)$

$\{7\}$

44) $172 = 7(6x + 4) - 6x$

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47) $112 = -8(1 + 5v)$

$\{-3\}$

48) $-175 = -7(1 - 4x)$

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Solve each equation (variable on both sides)

49) $-5 - 2k = -7k + k - 1$

$\{1\}$

50) $1 - 3x - 5 = 6x + 5$

$\{-1\}$

51) $-5x - 8 = 2x - 6 - 8 - 15$

$\{3\}$

52) $-5n - 6n = -12 - 7n - 6n$

$\{-6\}$

53) $-(1 - m) = 2(m + 2) - 5$

$\{0\}$

54) $-5p + 6(2p - 4) = -8 + 5(4 + 2p)$

$\{-12\}$

Solve each inequality and graph its solution.
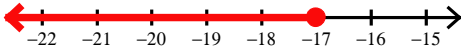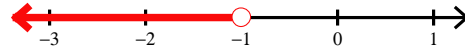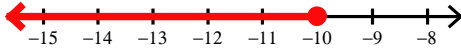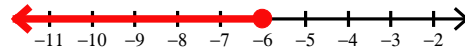
55) $11 \leq -x - 6$

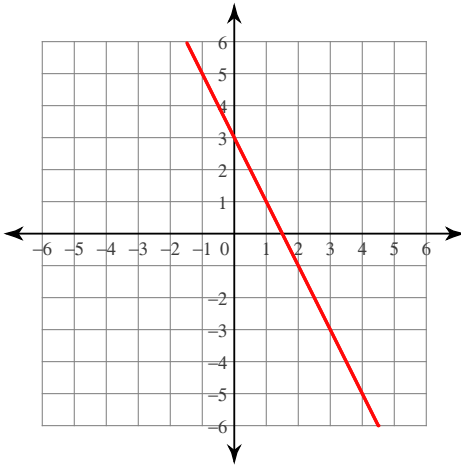
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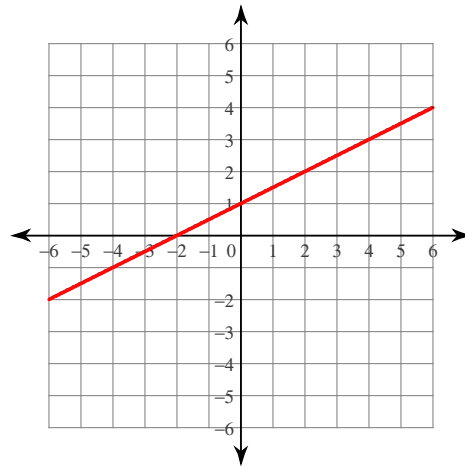58) $-3 \geq -1 + \dfrac{b}{3}$

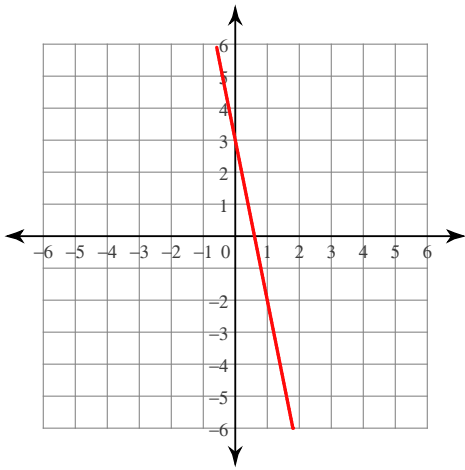**Sketch the graph of each line.**
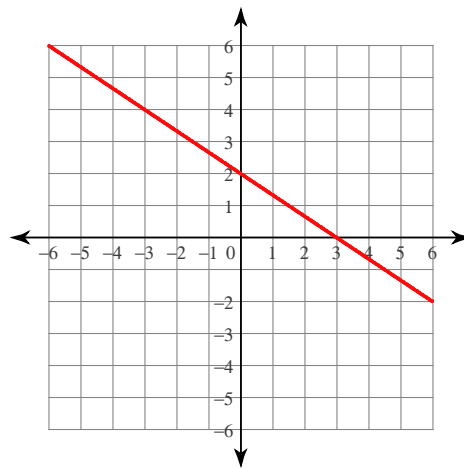
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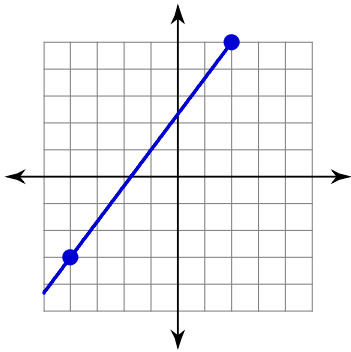
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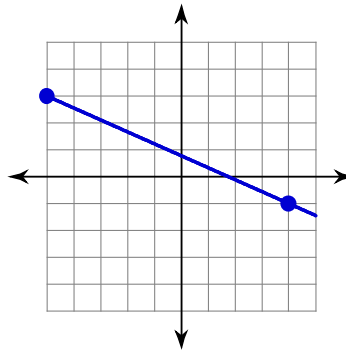62) $y = -\dfrac{2}{3}x + 2$

Find the slope of each line.

63)
$\dfrac{4}{3}$

64)
$-\dfrac{4}{9}$

Find the slope of the line through each pair of points.

65) $(-18, -9), (-14, -8)$

$\dfrac{1}{4}$

66) $(3, 13), (10, 8)$ $-\dfrac{5}{7}$

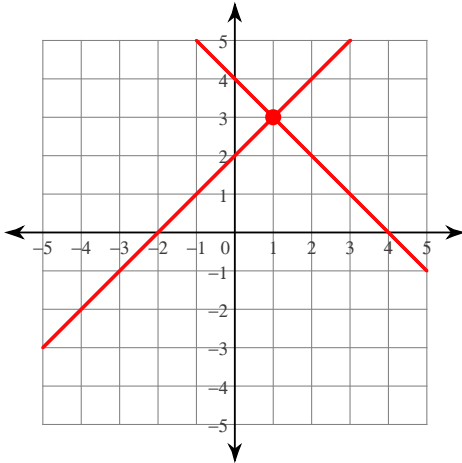**Find the slope of each line.**

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2

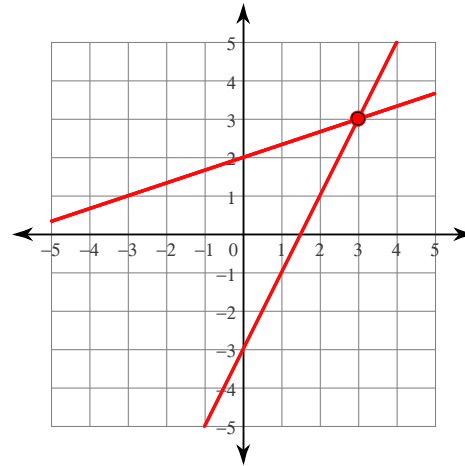68) $y = \dfrac{2}{5}x - 3$ $\dfrac{2}{5}$

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69) $y = x + 2$
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(1, 3)

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(3, 3)

Solve each system by substitution.

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    $y = 2x$

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    $6x - 6y = 6$

    (–7, –8)

73) $-8x - 4y = 20$
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75) A farmhouse shelters 16 animals. Some are cows and some are geese. Altogether there are 52 legs. How many of each animal are there?

    6 geese and 10 cows

76) Shayna bought 8 shirts for a total of $42. Tee shirts cost $9 and long sleeve shirts cost $4. How many of each type of shirt did she buy?

    2 tee shirts and 6 long sleeve shirts

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