Exam

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Write the sentence as a mathematical statement.

1) Negative twenty–four is equal to negative twenty–four.   1) _____

   A) $-24 \leq -24$ B) $-24 \geq -24$ C) $-24 = -24$ D) $-24 \neq -24$

Simplify the expression.

2) $\dfrac{53 + 7}{3^2 - 4}$ 2) _____

   A) 18   B) 12   C) 10   D) 30

Decide whether the given number is a solution of the given equation.

3) Is 10 a solution of $x + 1 = 11x$?   3) _____

   A) yes   B) no

4) Is 5 a solution of $4x - 2 = 58 - 8x$?   4) _____

   A) yes   B) no

Write the phrase as an algebraic expression. Let x represent the unknown number.

5) Eight more than a number   5) _____

   A) $8x$ B) $\dfrac{x}{8}$ C) $x - 8$ D) $x + 8$

Write the sentence as an equation or inequality. Use x to represent any unknown number.

6) One increased by two equals the quotient of twelve and four.   6) _____

   A) $1 + 2 = 12 \div 4$ B) $1 + 2 = 4 \div 12$ C) $1 + 2 = 12 \cdot 4$ D) $1 + 2 = 12 - 4$

If x = –4 and y = –2, evaluate the expression.

7) $\dfrac{12 - 6x}{y + 2}$ 7) _____

   A) -9 B) 0   C) 3   D) undefined

Decide whether the given number is a solution of the given equation.

8) Is 20 a solution of $\dfrac{x}{4} = -5$?   8) _____

   A) yes   B) no

Use the distributive property to write the expression without parentheses. Then simplify, if necessary.

9) $7(3 - 9y)$ 9) _____

   A) $84y$ B) $21 - 9y$ C) $21 - 63y$ D) $10 - 16y$

Simplify the expression by combining any like terms.

10) $7x^2 + 4x + 2 - 2x - 6 + 3x^2$ 10) _____

   A) $10x^4 + 2x^2 - 4$ B) $8x^3$ C) $5x^2 + 5x - 2$ D) $10x^2 + 2x - 4$

Simplify the expression. First use the distributive property to remove any parentheses.

11) $8(7n - 6)$

    A) $56n - 48$ B) $56n + 48$ C) $56n - 6$ D) $15n - 14$

11) _____

12) $\dfrac{1}{2}(6x + 5) - \dfrac{3}{4}(4x - 5)$

    A) $-\dfrac{5}{4}$ B) $\dfrac{25}{2}$ C) $\dfrac{25}{4}$ D) $-\dfrac{5}{2}$

12) _____

Write the following phrase(s) as an algebraic expression and simplify if possible. Let x represent the unknown number.

13) The difference of ten and a number, divided by five

    A) $\dfrac{10 - x}{5}$ B) $\dfrac{x - 10}{5}$ C) $\dfrac{x}{5} - 10$ D) $10 - \dfrac{x}{5}$

13) _____

Solve by combining like terms.

14) The value of 8 dimes is $10 \cdot 8 = 80$ cents. Likewise, the value of x dimes is 10x. If George finds $6x - 2$ nickels, 2x dimes, and x quarters in his change jar, express the total value of change in cents as an algebraic expression.

    A) $(75x + 10)$ cents   B) $(75x - 2)$ cents   C) $(50x - 10)$ cents   D) $(75x - 10)$ cents

14) _____

Solve the equation.

15) $4(4x + 8) = 17x$

    A) -8 B) -32 C) 8 D) 32

15) _____

16) $-4w - 15 + 5w = 6$

    A) -21 B) 9 C) 21 D) -9

16) _____

17) $\dfrac{n}{4} = 15$

    A) 3 B) 60 C) 18 D) 19

17) _____

18) $\dfrac{1}{4}(x + 6) = \dfrac{1}{6}(x + 8)$

    A) 2 B) $\{3\}$ C) -2 D) -12

18) _____

Write the algebraic expression described. Simplify if possible.

19) During a walk–a–thon, Rosilyn walked 19 fewer laps than June walked. If June walked b laps, how many laps did Rosilyn walk?

    A) $\dfrac{b}{19}$ laps   B) $(b - 19)$ laps   C) $(19 - b)$ laps   D) $(b + 19)$ laps

19) _____

20) A quadrilateral is a four–sided figure whose angle sum is 360°. If one angle measures x°, a second angle measures 4x°, and a third angle measures 6x°, express the measure of the fourth angle in terms of x.

    A) $(360 - 10x)°$ B) $(360 + 11x)°$ C) $(360 - 11x)°$ D) $(11x - 360)°$

20) _____

Solve the equation.

21) $8x - (2x - 1) = 2$ 21) _____

    A) $\dfrac{1}{10}$ B) $\dfrac{1}{6}$ C) $-\dfrac{1}{6}$ D) $-\dfrac{1}{10}$

22) $6n = 8(3n + 7)$ 22) _____

    A) $\dfrac{28}{9}$ B) $-\dfrac{28}{9}$ C) $\dfrac{9}{28}$ D) $\dfrac{28}{3}$

23) $\dfrac{5(7 - x)}{2} = x$ 23) _____

    A) -35 B) 35 C) 5 D) -5

24) $0.20(60) + 0.50x = 0.30(60 + x)$ 24) _____

    A) 30 B) 15 C) 40 D) 20

25) $\dfrac{1}{4}(8x - 12) = 6(\dfrac{1}{3}x - \dfrac{1}{2}) + 9$ 25) _____

    A) $\dfrac{9}{4}$ B) 0

    C) no solution   D) all real numbers

Write the following as an equation, using x for the unknown number. Then solve.

26) If 4 times a number is added to -9, the result is equal to 13 times the number. Find the number.   26) _____

    A) $17x - 13x = 9$;   1   B) $4x + (-9) = 13x$; -1

    C) $4x + (-9) = 13x$;   1   D) $13(4x - 9) = -9$; -1

Solve.

27) Seven times some number added to 7 amounts to -1 added to the product of 3 and the number.   27) _____

    A) -2 B) 8 C) 2 D) -8

28) To trim the edges of a rectangular table cloth, 48 feet of lace are needed. The length of the table cloth is exactly one–half its width. What are the dimensions of the table cloth?   28) _____

    A) length: 16 ft; width: 8 ft   B) length: 4 ft; width: 8 ft

    C) length: 16 ft; width: 32 ft   D) length: 8 ft; width: 16 ft

29) The house numbers of two adjacent homes are two consecutive even numbers. If their sum is 326, find the house numbers.   29) _____

    A) 161, 163   B) 163, 165   C) 162, 164   D) 162, 324

Substitute the given values into the formula and solve for the unknown variable.

30) $d = rt$; $t = 2$, $d = 14$ 30) _____

    A) 12 B) 7 C) 0.1 D) 16

Solve.

31) Sally is making a cover for a round table. When finished, the cover will fit exactly with no excess hanging off. Sally has to cut the fabric circle with a 4 inch larger diameter than the table to allow for hemming. If the table has a diameter of 58 inches, how much fabric does Sally need? (Use 3.14 for π. Round to 2 decimal places.)

31) _____

    A) 12,070.16 sq in.   B) 3419.46 sq in.   C) 11,304 sq in.   D) 3017.54 sq in.

Solve the formula for the specified variable.

32) $V = \dfrac{1}{3}Ah$ for h

32) _____

    A) $h = \dfrac{A}{3V}$ B) $h = \dfrac{V}{3A}$ C) $h = \dfrac{3V}{A}$ D) $h = \dfrac{3A}{V}$

Solve. If needed, round money amounts to two decimal places and all other amounts to one decimal place.

33) Because of budget cutbacks, MaryAnn was required to take a 18% pay cut. If she earned $28,000 before the pay cut, find her salary after the pay cut.

33) _____

    A) $22,960   B) $27,949.60   C) $2296   D) $27,496

34) At a gourmet nut shop, nuts are sold in bulk. Cashews sell for $1.20 per pound and macadamia nuts sell for $8.45 per pound. Lee wishes to purchase 5 pounds of mixed nuts by mixing 3.5 pounds of cashews and 1.5 pounds of macadamia nuts. What will be the price per pound of the mixture?

34) _____

    A) $6.28   B) $16.88   C) $3.38   D) $31.38

Solve.

35) Linda and Dave leave simultaneously from the same starting point biking in opposite directions. Linda bikes at 5 miles per hour and Dave bikes at 8 miles per hour. How long will it be until they are 20 miles apart from each other?

35) _____

    A) $\dfrac{1}{2}$ hr   B) $1\dfrac{7}{13}$ hr   C) $6\dfrac{2}{3}$ hr   D) $\dfrac{13}{20}$ hr

36) On a road trip, five friends drove at 50 miles per hour to California. On the way home, they took the same route but drove 65 miles per hour. How many miles did they drive on the way to California if the round trip took 10 hours?

36) _____

    A) $282\dfrac{14}{23}$ mi   B) $565\dfrac{5}{23}$ mi   C) $2166\dfrac{2}{3}$ mi   D) $5\dfrac{15}{23}$ mi

Solve the problem.

37) On a buying trip in Los Angeles, Rosaria Perez ordered 120 pieces of jewelry: a number of bracelets at $10 each and a number of necklaces at $12 each. She wrote a check for $1300 to pay for the order. How many bracelets and how many necklaces did Rosaria purchase?

37) _____

    A) 65 bracelets and 55 necklaces   B) 80 bracelets and 40 necklaces
    C) 75 bracelets and 45 necklaces   D) 70 bracelets and 50 necklaces

38) Jon throws all his nickels and dimes in a jar at home each day. He counted all his coins one day and found that he had collected $42.35. If there were five times as many nickels as dimes, how many of each coin does he have?

38) _____

    A) 605 dimes; 600 nickels   B) 121 dimes; 605 nickels
    C) 121 dimes; 5 nickels   D) 605 dimes; 121 nickels

Solve.

39) How can $42,000 be invested, part at 4% annual simple interest and the remainder at 10% annual simple interest, so that the interest earned by the two accounts is equal at the end of the year?
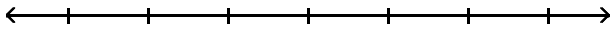   A) $22,000 invested at 4%; $20,000 invested at 10%
    B) $20,000 invested at 4%; $22,000 invested at 10%
    C) $12,000 invested at 4%; $30,000 invested at 10%
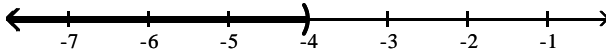   D) $30,000 invested at 4%; $12,000 invested at 10%

39) _____

Solve the inequality. Graph the solution set and write it in interval notation.

40) $15x - 35 > 5(2x - 11)$

40) _____

A) $(-\infty, -4)$

B) $(-\infty, -4]$
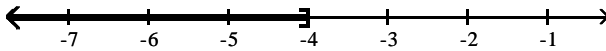
C) $(-4, \infty)$
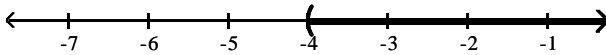
D) $[-4, \infty)$
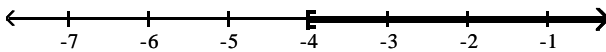
Find the x- and y-coordinates of the following labeled points.

41)

41) _____
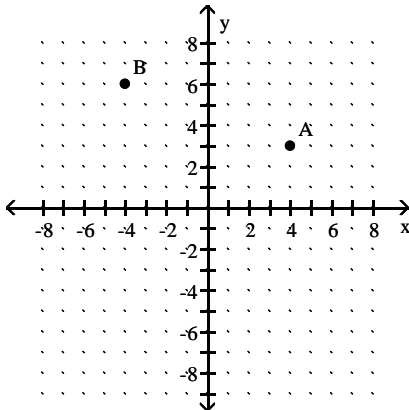
A) A(4, 3); B(-4, 6)   B) A(3, 24); B(6, -4)
C) A(4, 3); B(6, -4)   D) A(4, 6); B (3, 6)

Determine whether the ordered pair is a solution of the given linear equation.

42) $x = 8y$; (0, 0)
    A) yes   B) no

42) _____

43) $2x + 6y = -4$; (0, -2)
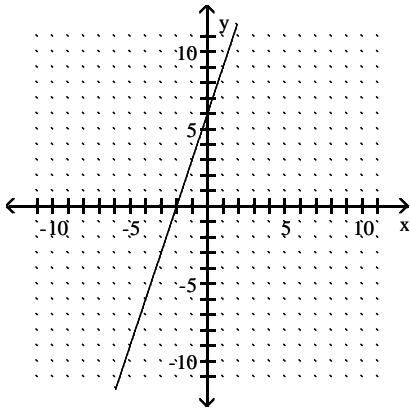   A) yes   B) no

43) _____

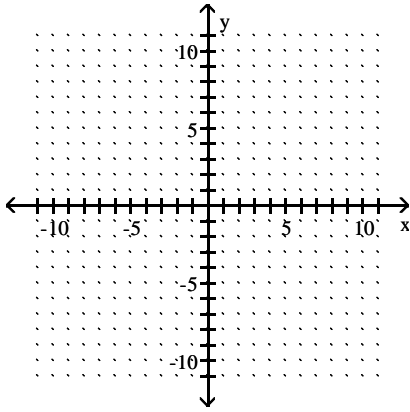**Graph the linear equation.**

44) −4x + 12y = 24

44) _____

A)

B)

C)

D)
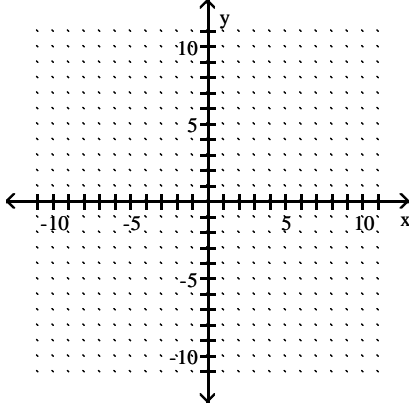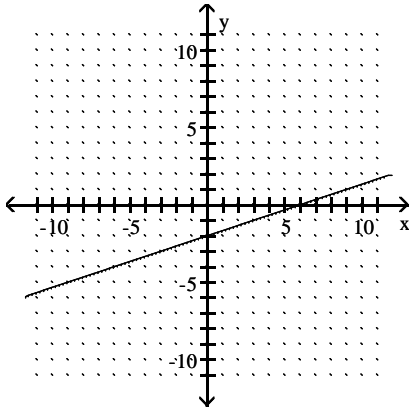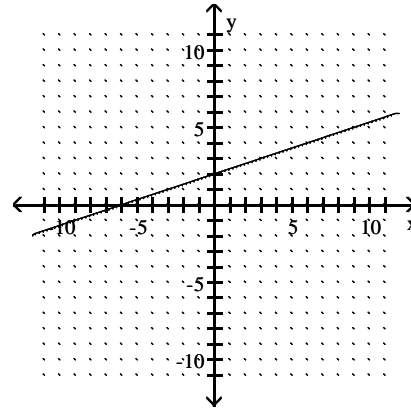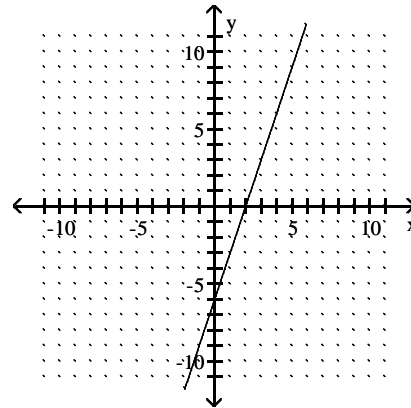
45) x = –5y

A)
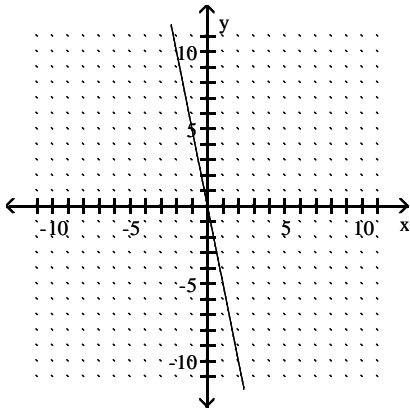
B)
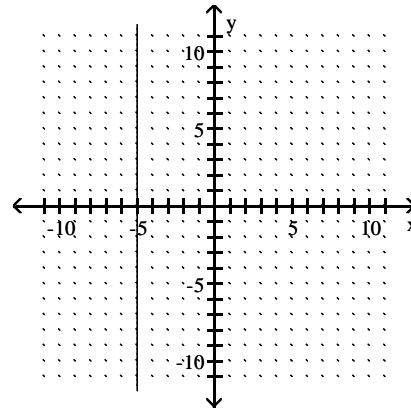
C)
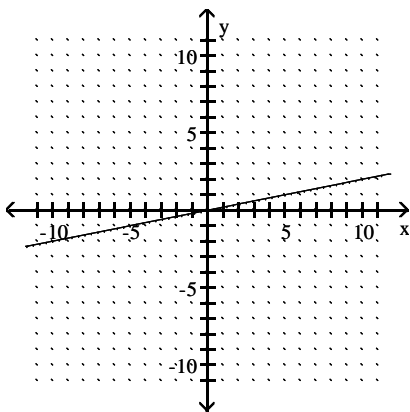
D)
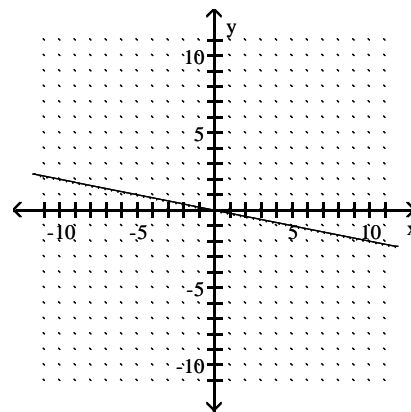
Find the slope of the line.

46) x + y = 3

    A) m = –1   B) m = 0

    C) m = 1   D) undefined slope

46) _____

47) y = 9

    A) m = 1   B) m = 0

    C) undefined slope   D) m = 9

47) _____

48) x = –2

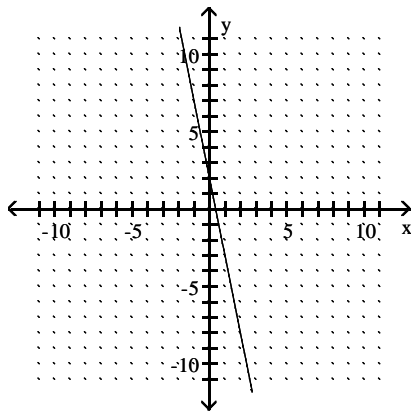   A) m = 0   B) m = –1

    C) m = 1   D) undefined slope

48) _____

Match the graph with its equation.

49) y = –5x – 2

49) _____

A)

B)

C)

D)
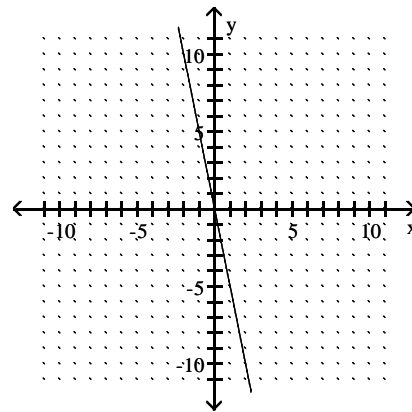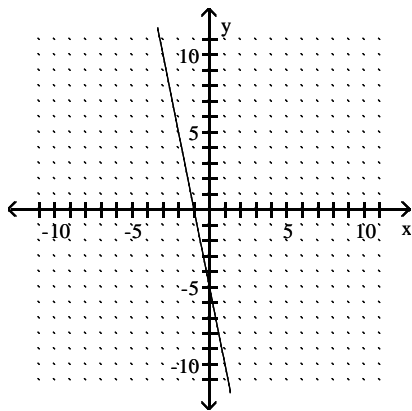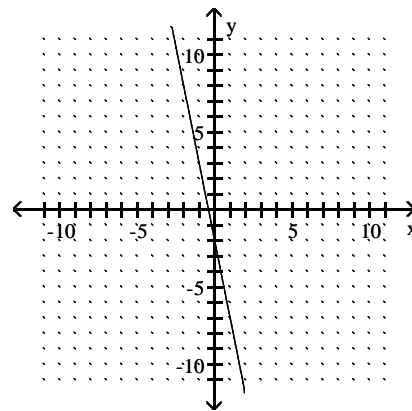
Identify the intercepts.

50)
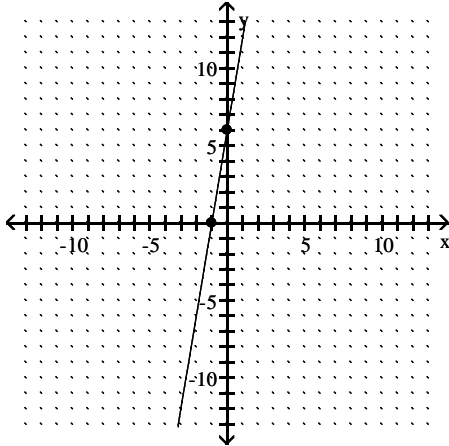
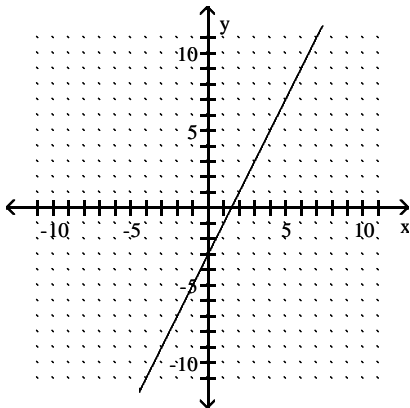A) (–1, 0), (0, 6)   B) (–6, 0), (0, 6)   C) (–1, 0), (0, –6)   D) (1, 0), (0, 6)

Find the slope of the line if it exists.

51)

A) $-\dfrac{1}{2}$ B) 2   C) $\dfrac{1}{2}$ D) –2

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

52) $y = 4x - 4$
    $x - 4y = 5$
    A) parallel   B) perpendicular   C) neither

53) $6x + 2y = 8$
    $27x + 9y = 39$
    A) parallel   B) perpendicular   C) neither

Solve.

54) To the nearest dollar, the average tuition at a public four–year college was $3117 in 1997 and
    $3317 in 1998. Use the ordered pairs (1997, $3117) and (1998, $3317) to find and interpret the slope
    of the line representing the change in tuition (to the nearest dollar per year).
    A) tuition increased $200 per year   B) tuition decreased $200 per year
    C) tuition increased $211 per year   D) tuition increased $217 per year

Write an equation of the line with the given slope, m, and y–intercept (0, b).

55) $m = -4$, $b = \dfrac{1}{2}$

        55) _____

    A) $y = -\dfrac{1}{2}x - 4$ B) $y = 4x + \dfrac{1}{2}$ C) $y = \dfrac{1}{2}x + 4$ D) $y = -4x + \dfrac{1}{2}$

56) $m = \dfrac{1}{2}$, $b = 0$

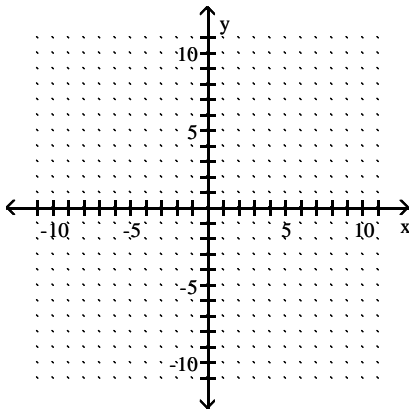   56) _____

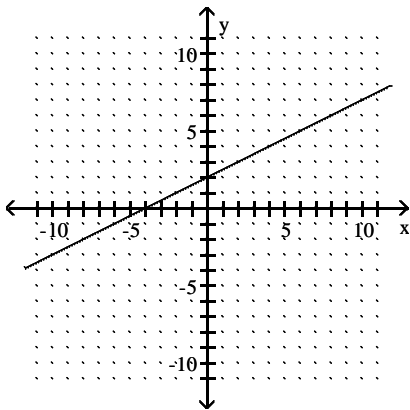   A) $x = \dfrac{1}{2}$ B) $y = 0$ C) $y = \dfrac{1}{2}$ D) $y = \dfrac{1}{2}x$

Use the slope–intercept form to graph the equation.
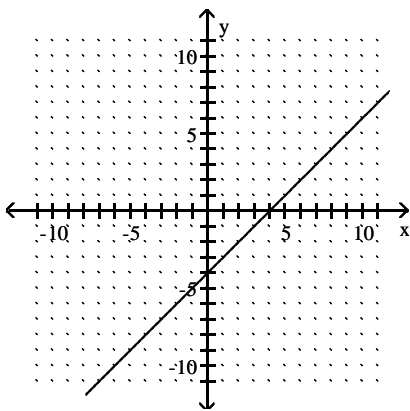
57) $y = -\dfrac{1}{2}x + 2$

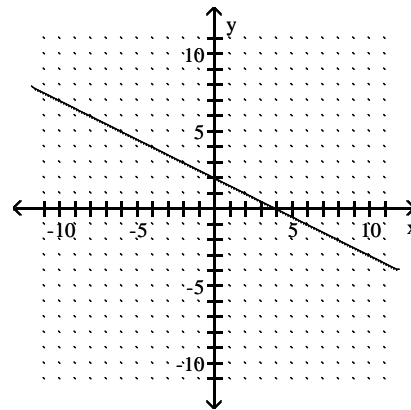   57) _____
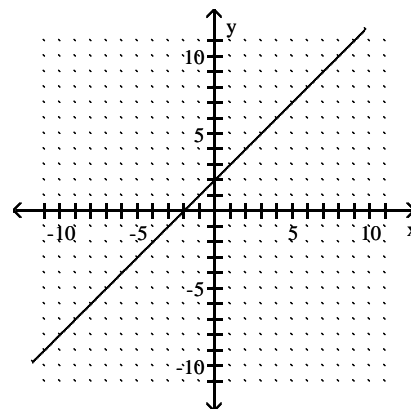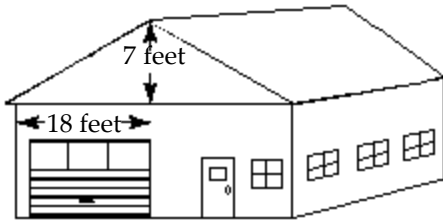

A)

B)

C)

D)

Solve.

58) The pitch of a roof is its slope. Interpret the pitch of the roof shown.   58) _____

  A) For each horizontal distance of 7 feet, the roof height increases by 18 feet.
  B) For each horizontal distance of 7 feet, the roof height decreases by 18 feet.
  C) For each horizontal distance of 18 feet, the roof height increases by 7 feet.
  D) For each horizontal distance of 18 feet, the roof height decreases by 7 feet.

Find an equation of the line described. Write the equation in slope –intercept form if possible.

59) Slope $-\dfrac{8}{9}$, through (4, 2)   59) _____

  A) $y = -\dfrac{8}{9}x - \dfrac{50}{9}$ B) $y = -\dfrac{8}{9}x + \dfrac{50}{9}$ C) $y = \dfrac{8}{9}x - \dfrac{50}{9}$ D) $y = -\dfrac{9}{8}x - \dfrac{25}{4}$

Find an equation of the line through the pair of points. Write the equation in the form Ax + By = C.

60) (9, –8) and (0, 3)   60) _____
  A) $11x + 9y = 27$ B) $17x - 3y = -9$ C) $-11x + 9y = 27$ D) $-17x + 3y = -9$

Solve. Assume the exercise describes a linear relationship.

61) An investment is worth $2401 in 1994. By 1997 it has grown to $3520. Let y be the value of the   61) _____
investment in the year x, where x = 0 represents 1994. Write a linear equation that models the
value of the investment in the year x.

  A) $y = \dfrac{1}{373}x + 2401$ B) $y = 373x + 2401$

  C) $y = -373x + 2401$ D) $y = -373x + 4639$

62) A gas station sells 4820 gallons of regular unleaded gasoline in a day when they charge $1.35 per   62) _____
gallon, whereas they sell 3885 gallons on a day that they charge $1.40 per gallon. Find a linear
equation that relates gallons sold to price. Use this equation to predict the number of gallons sold
at a price of $1.22 per gallon.
  A) 7260 gal   B) 7247.7 gal   C) 7255.1 gal   D) 7251 gal

Find the domain and the range of the relation.

63) {(14, 14), (–2, –9), (1, 6)}   63) _____
  A) domain: {–9, 6, 14} ; range: {–2, 1, 14}   B) domain: {–2, 6, 14} ; range: {–9, 1, 14}
  C) domain: {–2, 1, 14} ; range: {–9, 6, 14}   D) domain: {–2, 1, 14} ; range: {–9, 6}
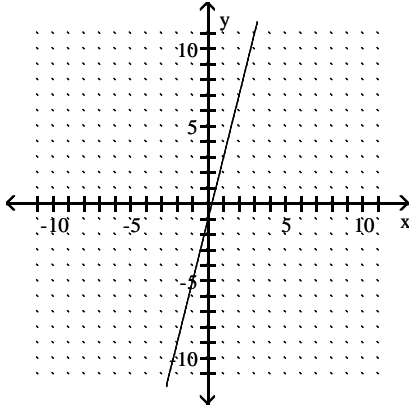
64) {(8, 5), (–7, 5), (–5, 5)}   64) _____
  A) domain: {–7, –5, 8} ; range: {5}   B) domain: {–7, 5, 8} ; range: {–5}
  C) domain: {5} ; range: {–7, –5, 8}   D) domain: {–7, –5} ; range: {5, 8}

Determine whether the graph is the graph of a function.

65)

A) yes   B) no

66)
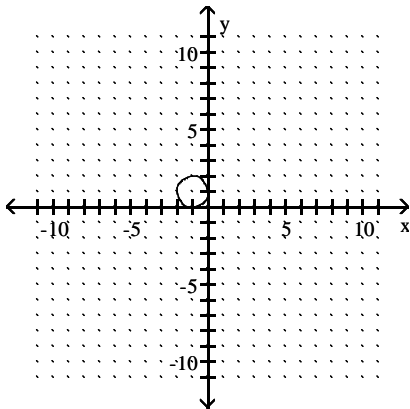
A) yes   B) no

Evaluate the function.

67) Find f(5) when $f(x) = 3x^3$

    A) 375   B) 75   C) 125   D) 45

Determine whether the ordered pair is a solution of the system of linear equations.

68) (2, 5);
$$\begin{cases} x + y = 3 \\ x - y = -7 \end{cases}$$
    A) Yes   B) No

69) (6, 7);
$$\begin{cases} 3x = 25 - y \\ x + 3y = 27 \end{cases}$$
    A) Yes   B) No

Find the domain and range of the function graphed.
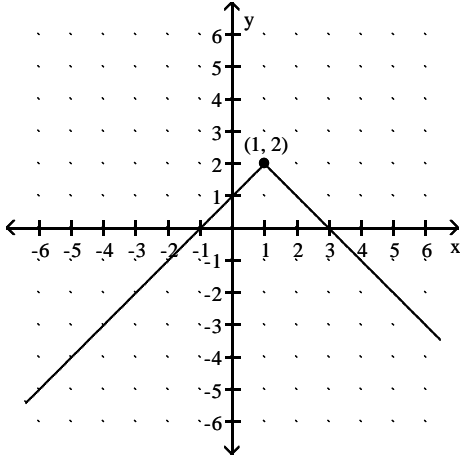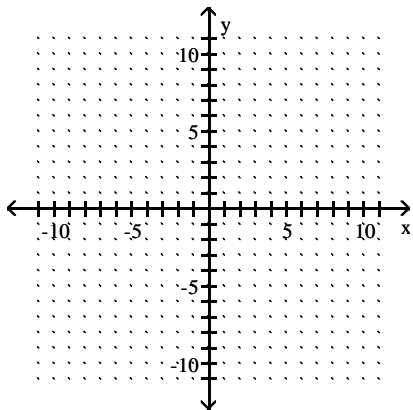
70)

    A) domain: $(-\infty, 1) \cup (1, \infty)$; range: $(-\infty, 2) \cup (2, \infty)$
    B) domain: $(-\infty, 1]$; range: $(-\infty, 2]$
    C) domain: $(-\infty, \infty)$; range: $(-\infty, 2]$
    D) domain: $(-\infty, \infty)$; range: $(-\infty, \infty)$

70) _____

Solve the system of equations by graphing.

71) $\begin{cases} 2x + y = 2 \\ 3x + y = 1 \end{cases}$

    A) $(-1, 4)$ B) $(4, -1)$ C) no solution   D) $(1, -4)$

71) _____

Without graphing, decide:
(a) Are the graphs of the equations are identical lines, parallel lines, or lines intersecting at a single point?
(b) How many solutions does the system have?

72) $\begin{cases} 3x - y = 8 \\ x + 4y = 20 \end{cases}$

    A) parallel lines; no solution
    B) identical lines; infinite number of solutions
    C) lines intersecting at a single point; one solution

72) _____

13

73) $\begin{cases} x = -y \\ y + x = -4 \end{cases}$

A) lines intersecting at a single point; one solution
B) parallel lines; no solution
C) identical lines; infinite number of solutions

73) _____

Solve the system of equations by graphing.

74) $\begin{cases} x + y = 5 \\ x - y = 3 \end{cases}$

74) _____
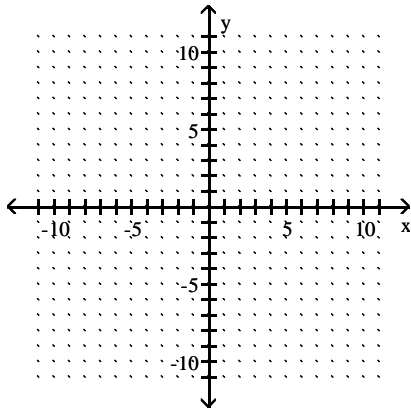
A) (4, 1)   B) (4, –1)   C) no solution   D) (1, 4)

Solve the system of equations by the substitution method.

75) $\begin{cases} \dfrac{1}{7}x - 2y = 1 \\ x - 14y = 7 \end{cases}$

75) _____

A) infinite number of solutions   B) no solution
C) (1, –7)   D) (7, –1)

Solve the system of equations by the addition method.

76) $\begin{cases} \dfrac{x}{5} + \dfrac{y}{15} = 1 \\ \dfrac{x}{4} - \dfrac{y}{12} = 0 \end{cases}$

76) _____

A) infinite number of solutions   B) no solution

C) $\left(\dfrac{15}{2}, \dfrac{5}{2} \right)$ D) $\left(\dfrac{5}{2}, \dfrac{15}{2} \right)$

Solve the system of equations by either the addition method or the substitution method.

77) $\begin{cases} x = 7y + 10 \\ 3x - 8y = 4 \end{cases}$

77) _____

A) (–5, –1)   B) (4, –1)   C) no solution   D) (–4, –2)

Write a system of equations in x and y describing the situation. Do not solve the system.

78) An order of 4 orders of fries, 4 hamburgers, and 5 drinks costs \$17. An order of 3 orders of fries, 5 hamburgers, and 2 drinks costs \$15. All drinks are \$1.

78) _____

A) $\begin{cases} (4x)(4y) + 5 = 17 \\ (3x)(5y) + 2 = 15 \end{cases}$

B) $\begin{cases} 4x + 4y + 5 = 17 \\ 3x + 5y + 2 = 15 \end{cases}$

C) $\begin{cases} 4x + 4y + 1 = 17 \\ 3x + 5y + 1 = 15 \end{cases}$

D) $\begin{cases} 4x + 4y + 5 = 12 \\ 3x + 5y + 2 = 13 \end{cases}$

Solve.

79) Khang and Hector live 18 miles apart in southeastern Missouri. They decide to bicycle towards each other and meet somewhere in between. Hector's rate of speed is 80% of Khang's. They start out at the same time and meet 2 hours later. Find Hector's rate of speed.

79) _____

A) 4 mph B) 10 mph C) 5 mph D) 18 mph

Simplify the expression.

80) $(-2z^2)(5z^3)$

80) _____

A) $-10z^6$ B) $10z^6$ C) $500z^5$ D) $-10z^5$

81) $\left(\dfrac{5x^3}{y^2}\right)^4$

81) _____

A) $\dfrac{625x^{12}}{y^8}$ B) $\dfrac{626x^7}{y^6}$ C) $\dfrac{625x^{12}}{y^2}$ D) $\dfrac{5x^{12}}{y^8}$

82) $\dfrac{(15pq)^3}{125p^3q^3}$

82) _____

A) $\dfrac{27}{25p^2q^2}$ B) $27p^6q^6$ C) 27 D) $\dfrac{3}{25}$

Simplify the following by combining like terms.

83) $3.9x^3 - 6.1x + 11.9 + 1.3x - x^3 - 8.6$

83) _____

A) $2.9x^3 - 4.8x + 3.3$ B) $1.4x^4$
C) $3.9x^3 + 7.4x + 20.5$ D) cannot be simplified

84) $\dfrac{3}{4}x^2 + \dfrac{4}{5}x + \dfrac{1}{5} - \dfrac{1}{2}x^2 + \dfrac{3}{5}x + \dfrac{1}{4}$

84) _____

A) $\dfrac{1}{4}x^2 + \dfrac{7}{5}x + \dfrac{9}{20}$ B) $-\dfrac{15}{4}x^2 + \dfrac{24}{5}x + \dfrac{1}{2}$

C) $\dfrac{33}{20}x^6 + \dfrac{9}{20}$ D) $\dfrac{1}{4}x^4 + \dfrac{7}{5}x^2 + \dfrac{9}{20}$

Perform the indicated operation.

85) $(8x + 11) + (10x + 7)$

85) _____

A) $80x^2 + 77$ B) $18x + 18$ C) $18x^2 + 18$ D) $18x - 18$

15

86) $(-8y + 8) + (-5y^2 + 4y - 4)$ 86) _____

    A) $-12y^2 - 5y + 4$ B) $-5y^2 - 4y + 4$ C) $-5y^2 - 4y + 12$ D) $-5y^2 + 4y + 4$

87) $(20x + 6) - (-3x^2 - 10x + 6)$ 87) _____

    A) $-3x^2 + 10x + 12$ B) $3x^2 + 30x - 12$ C) $3x^2 - 30x$ D) $3x^2 + 30x$

88) Subtract $(-9x^2 - 3x + 2)$ from $(-x^2 - 6x + 7)$. 88) _____

    A) $10x^2 - 3x + 9$ B) $-10x^2 - 9x + 9$ C) $8x^2 + 3x + 5$ D) $8x^2 - 3x + 5$

Multiply.

89) $-2x(2x^2 - 7x + 6)$ 89) _____

    A) $-4x^2 + 14x - 12$ B) $-4x^3 + 14x^2 - 12x$

    C) $-4x^3 - 7x + 6$ D) $-4x^3 + 14x^2 - 12$

90) $(z + 3)(z + 4)$ 90) _____

    A) $2z + 12$ B) $z^2 + 7z + 7$ C) $2z^2 + 12$ D) $z^2 + 7z + 12$

91) $(10z + 1)^2$ 91) _____

    A) $100z^2 + 20z + 1$ B) $10z^2 + 1$ C) $10z^2 + 20z + 1$ D) $100z^2 + 1$

92) $(a - 7)(a^2 + 7a - 3)$ 92) _____

    A) $a^3 - 14a^2 - 52a + 21$ B) $a^3 + 14a^2 + 52a - 21$

    C) $a^3 + 46a - 21$ D) $a^3 - 52a + 21$

93) $(x + 9)(x^3 + 6x - 7)$ 93) _____

    A) $x^4 + 9x^3 + 6x^2 + 61x + 63$ B) $x^4 + 9x^3 + 6x^2 + 47x - 63$

    C) $x^4 + 6x^2 - 7x + 9$ D) $x^3 + 15x^2 + 47x - 63$

94) $(5p + 6)(5p - 6)$ 94) _____

    A) $25p^2 - 60p - 36$ B) $25p^2 - 36$ C) $p^2 - 36$ D) $25p^2 + 60p - 36$

Simplify the expression. Write the result using positive exponents only.

95) $\dfrac{15r^5(r^{-5})^{-2}}{16(r^5)^5}$ 95) _____

    A) $\dfrac{15}{16r^{12}}$ B) $\dfrac{15r^{10}}{16}$ C) $\dfrac{15}{16r^{10}}$ D) $\dfrac{15r^{12}}{16}$

96) $\left(\dfrac{xy^5}{x^5y}\right)^{-2}$ 96) _____

    A) $\dfrac{1}{x^7y^{11}}$ B) $\dfrac{y^8}{x^8}$ C) $\dfrac{1}{x^{12}y^{12}}$ D) $\dfrac{x^8}{y^8}$

97) $(-5x^6y^{-7})(2x^{-1}y)$

    A) $\dfrac{-3x^5}{y^6}$ B) $\dfrac{-10x^5}{y^6}$ C) $\dfrac{-10x^7}{y^8}$ D) $-10x^5y^8$

    97) _____

Write the number in scientific notation.

98) 44,000,000

    A) 4.4×10^7 B) 4.4×10^{-6} C) 4.4×10^6 D) 4.4×10^{-7}

    98) _____

99) 0.000050215

    A) 5.0215×10^{-4} B) 5.0215×10^5 C) 5.0215×10^4 D) 5.0215×10^{-5}

    99) _____

Write the number in standard notation.

100) 6.049×10^7

    A) 423.43   B) 604,900,000   C) 60,490,000   D) 6,049,000

    100) _____

101) 5.807×10^{-6}

    A) 0.0000005807   B) 0.00005807   C) 0.000005807   D) −5,807,000

    101) _____

Evaluate the expression using exponential rules. Write the result in standard notation.

102) $\dfrac{4 \times 10^{-2}}{8 \times 10^4}$

    A) 0.0000005   B) 500,000   C) −500,000   D) −0.0000005

    102) _____

103) $(5 \times 10^{-3})(7 \times 10^{-2})$

    A) 0.0035   B) 0.000035   C) 0.00035   D) 0.0000035

    103) _____

Perform the division.

104) $\dfrac{6x^5 + 12x^1}{-2x^{-3}}$

    A) $6x^5 - 6x^4$ B) $-9x^9$ C) $-3x^8 - 6x^4$ D) $-3x^8 + 12x^1$

    104) _____

105) $\dfrac{35x^7 + 10x^6 + 35x^5}{5x^6}$

    A) $7x + 2 + \dfrac{7}{x}$ B) $14x + 2$ C) $7x + 10x^6 + \dfrac{7}{x}$ D) $7x + 2$

    105) _____

Answer Key
Testname: 112 COMMON FINAL PRACTICE 11-12-14

1) C
2) B
3) B
4) A
5) D
6) A
7) D
8) B
9) C
10) D
11) A
12) C
13) A
14) D
15) D
16) C
17) B
18) C
19) B
20) C
21) B
22) B
23) C
24) A
25) C
26) B
27) A
28) D
29) C
30) B
31) D
32) C
33) A
34) C
35) B
36) A
37) D
38) B
39) D
40) C
41) A
42) A
43) B
44) B
45) D
46) A
47) B
48) D
49) D
50) A

51) B
52) C
53) A
54) A
55) D
56) D
57) B
58) C
59) B
60) A
61) B
62) D
63) C
64) A
65) A
66) B
67) A
68) B
69) A
70) C
71) A
72) C
73) B
74) A
75) A
76) D
77) D
78) B
79) A
80) D
81) A
82) C
83) A
84) A
85) B
86) B
87) D
88) D
89) B
90) D
91) A
92) D
93) B
94) B
95) C
96) D
97) B
98) A
99) D
100) C

101) C
102) A
103) C
104) C
105) A