Student: _____ **Date:** _____	**Instructor:** Alfredo Alvarez **Course:** Algebra Foundations, Martin-Gay, Elayn **Assignment:** m041029

1. Solve. First combine any like terms on each side of the equation.

    $8w - 15w = 42$

    w = _____

2. Solve the equation. First combine any like terms on each side of the equation.

    $20 = t + 4t$

    The solution is t = _____ .

3. Solve the equation. First combine any like terms on each side of the equation.

    $4z = 18 - 42$

    The solution is z = _____ .

4. Solve the equation. First combine any like terms on each side of the equation.

    $8 - 18 = \dfrac{z}{-8}$

    The solution is z = _____ .

5. Solve the equation. First combine any like terms on each side of the equation.

    $-2x - 2x = 16 - 4$

    The solution is x = _____ .

6. Solve the equation. First combine any like terms on each side of the equation.

    $\dfrac{x}{21} = -19 + 16$

    x = _____

7. Solve and check the solution.

    $3(3x - 3) = 10x$

    x = _____

8. Solve the equation $17y = 16(y + 9)$.

    y = _____

9. Solve. First multiply to remove parentheses.

    $73y = 8(9y - 2)$

    The solution is y = _____ .

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10. Solve the equation.

    $7x + 5 = -5 + 5x + 14$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____ (Type an integer or a simplified fraction.)
    ○ **B.** The solution is all real numbers.
    ○ **C.** There is no solution.

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11. Solve the equation.

    $-3y - 14 = 6y + 13$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** y = _____ (Type an integer or a simplified fraction.)
    ○ **B.** The solution is all real numbers.
    ○ **C.** There is no solution.

---

12. Solve the equation.

    $$\frac{2}{3}x + \frac{4}{3} = -\frac{2}{3}$$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____
    ○ **B.** The solution is all real numbers.
    ○ **C.** There is no solution.

---

13. Solve the equation for x.

    $$\frac{2}{9}x - \frac{1}{3} = -1$$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____ (Simplify your answer. Type an integer or a fraction.)
    ○ **B.** The solution is all real numbers.
    ○ **C.** There is no solution.

14. Solve the equation.

    $0.20x + 0.45(30) = 27.5$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____

    ○ **B.** The solution is all real numbers.

    ○ **C.** There is no solution.

15. Solve the equation for x.

    $2(5x + 3) = 10x + 6$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____ (Type an integer or a fraction. Simplify your answer.)

    ○ **B.** The solution is all real numbers.

    ○ **C.** There is no solution.

16. Solve the equation.

    $$\frac{x}{4} + 2 = \frac{x}{4}$$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** x = _____

    ○ **B.** The solution is all real numbers.

    ○ **C.** There is no solution.

17. Substitute the given values into the given formula and solve for the unknown variable. If necessary, round to one decimal place.

    $P = a + b + c$; $P = 31$, $a = 5$, $b = 11$ (Perimeter of a triangle)

    c = _____

18. Substitute the given values into the given formula and solve for the unknown variable. If necessary, round to one decimal place. (Use the approximation 3.14 for π.)

    $C = 2\pi r$; $C = 28.3$ (Circumference of a circle)

    r = _____

19. Solve the formula for the specified variable.

    $V = AQS$ for A

    A = _____

20. Solve the equation for y.

    $8x + y = 5$

    y = _____

21. Solve the formula for the specified variable.

    $A = P + Prt$ for r

    r = _____

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

    $V = \frac{4}{3}\pi r^3$, r = 3.2 (Volume of a sphere) (Use a calculator approximation for π.)

    $V \approx$ _____ . (Type an integer or a decimal. Round to the nearest tenth as needed.)

23. Graph an inequality on the number line. Then write the solution in interval notation.

    $7x - 5 > 6x - 4$

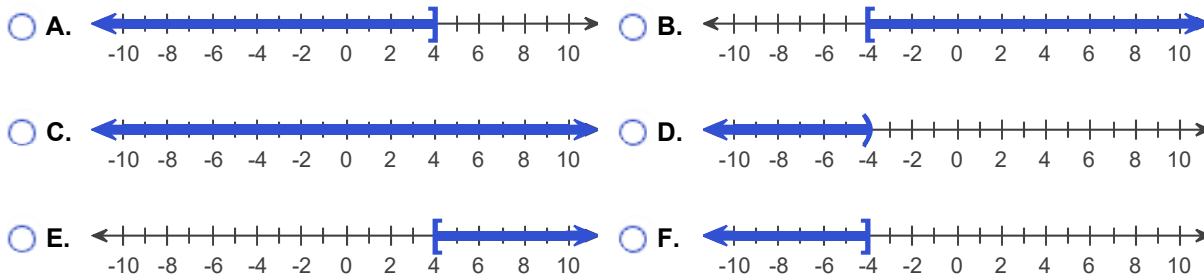   Graph the inequality on the number line. Choose the correct number line below.

    A.   B.

    C.   D.

    E.   F.
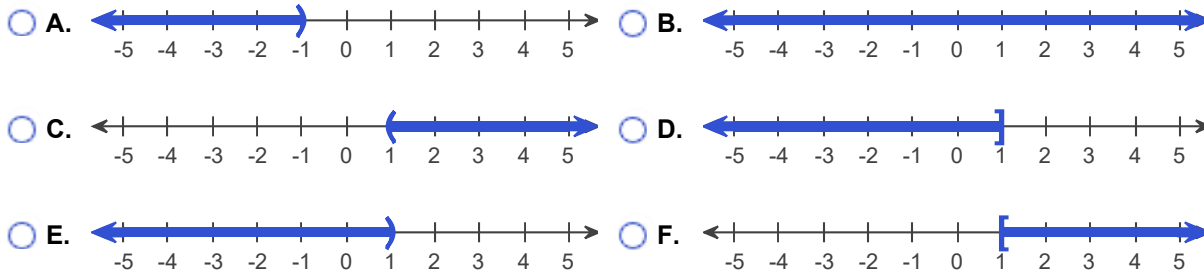
    The solution to the inequality $7x - 5 > 6x - 4$ is _____ .
    (Type your answer in interval notation.)

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

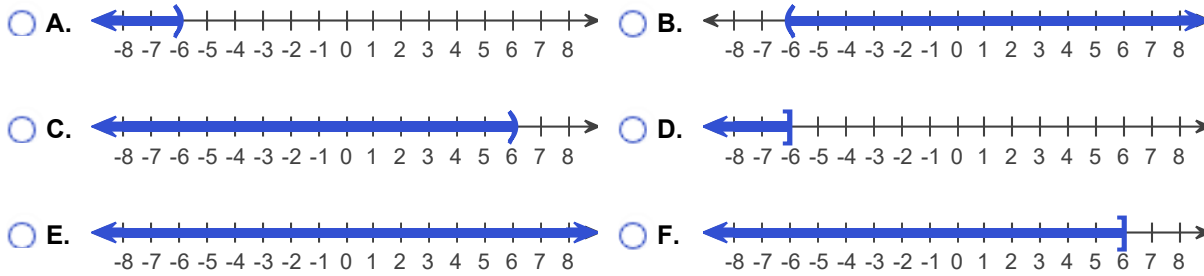 $2x - 4 \le 3x - 2x$

    Choose the graph of the solution set.

    A.   B.

    C.   D.

    E.   F.

    The solution to the inequality $2x - 4 \le 3x - 2x$ is _____ .
    (Type your answer in interval notation.)

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

    $4x < -24$

Choose the correct graph below.

○ **A.**   ○ **B.**

○ **C.**   ○ **D.**
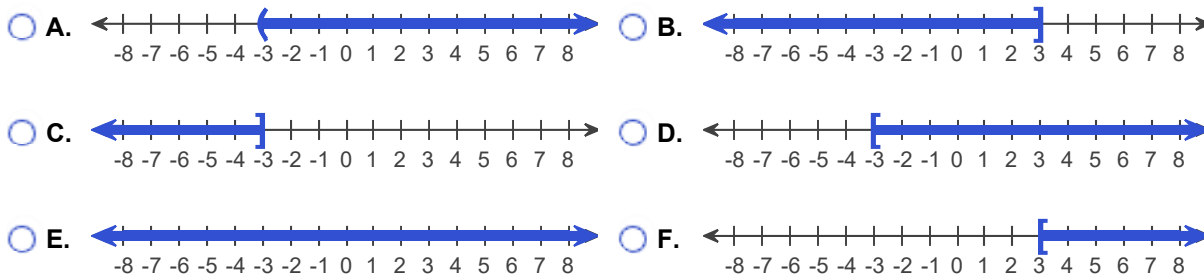
○ **E.**   ○ **F.**

The solution to the inequality $4x < -24$ is _____ .
(Type your answer in interval notation.)

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

    $-8x \leq 24$

Choose the correct graph below.

○ **A.**   ○ **B.**

○ **C.**   ○ **D.**

○ **E.**   ○ **F.**

The solution to the inequality $-8x \leq 24$ is _____ .
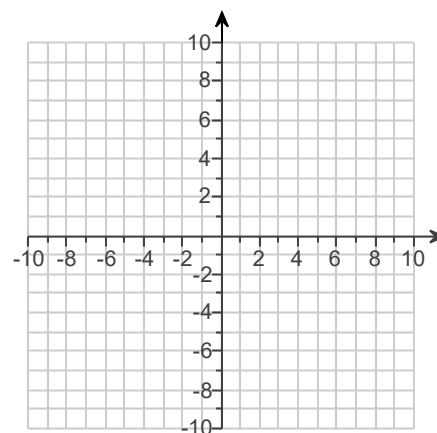(Type your answer in interval notation.)

27. For the following equation, find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

    $y = -2x + 2$

Find three ordered pair solutions of the given equation.

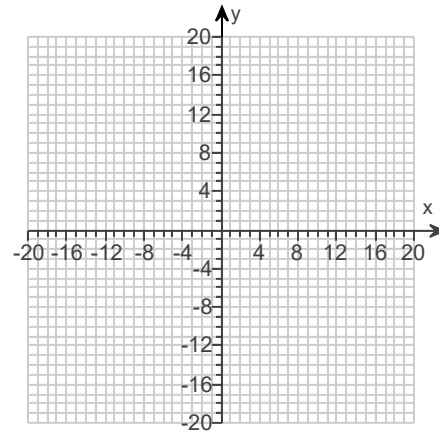| x	y
0	
1	
2	

Use the graphing tool to graph the line.

28. Graph the equation.

    y = 3x + 6

    Use the graphing tool to graph the line.

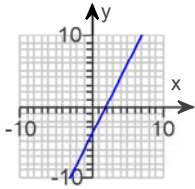
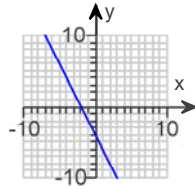29. Match the equation with its graph.
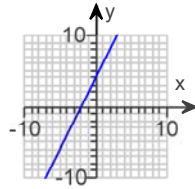
    y = 2x + 4

    Choose the correct graph below.

    ○ **A.**   ○ **B.**   ○ **C.**   ○ **D.**

---

30. Find the slope of the line that goes through the given points.

    (− 3, 8) and (− 5, − 4)

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** The slope is _____. (Type an integer or a simplified fraction.)
    ○ **B.** The slope is undefined.

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31. Find the slope of the line that goes through the given points.

    (− 2, 6) and (− 2, 3)

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** The slope is _____. (Type an integer or a fraction. Simplify your answer.)
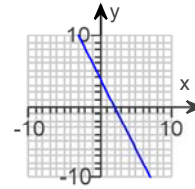   ○ **B.** The slope is undefined.

32. Find the slope of the line that goes through the given points.

    $(10, \ -9)$ and $(-4, \ -8)$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** The slope is _____ . (Simplify your answer.)
    ○ **B.** The slope is undefined.

33. Find the slope of the line that goes through the given points.

    $(3, 8)$ and $(-6, 8)$

    Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

    ○ **A.** The slope is _____ .(Type an integer or a fraction. Simplify your answer.)
    ○ **B.** The slope is undefined.

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

    $y = \dfrac{7}{4}x + 1$

    $y = -\dfrac{7}{4}x$

    Choose the correct answer below.

    ○ **A.** Perpendicular
    ○ **B.** Parallel
    ○ **C.** Neither

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

    $x - 2y = -3$
    $y = 9x - 5$

    Choose the correct answer below.

    ○ **A.** The two lines are neither parallel nor perpendicular.
    ○ **B.** The two lines are parallel.
    ○ **C.** The two lines are perpendicular.

36. Find an equation of the line with the given slope that passes through the given point. Write the equation in the form $Ax + By = C$.

    $m = 8, (2,2)$

    The equation of the line in the form $Ax + By = C$ is _____ .
    (Simplify your answer. Use integers or fractions for any numbers in the equation.)

37. Find the slope-intercept equation of the line that has the given characteristics.

   Slope -7 and y-intercept $(0,8)$

   The equation is _____ .

   (Simplify your answer. Type your answer in slope-intercept form. Use integers or fractions for any numbers in the equation.)

38. Find the value of $x^2 - 4x + 1$ for the given value of x.

   $x = -3$

   The value of the polynomial for $x = -3$ is _____ . (Simplify your answer.)

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

   $$\begin{cases} x + y = 8 \\ 3x + 4y = 28 \end{cases}$$

   a. $(6,2)$
   b. $(4,4)$

   a. Is $(6,2)$ a solution?

   ○ No
   ○ Yes

   b. Is $(4,4)$ a solution?

   ○ No
   ○ Yes

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

   $$\begin{cases} x + y = 5 \\ 2x + 5y = 22 \end{cases}$$

   a. $(2,3)$
   b. $(1,4)$

   a. Is $(2,3)$ a solution?

   ○ Yes
   ○ No

   b. Is $(1,4)$ a solution?

   ○ No
   ○ Yes

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

$$\begin{cases} 2x - y = 4 \\ x + 4y = 11 \end{cases}$$

a. (3,2)
b. (6,8)

a. Is (3,2) a solution?

○ No
○ Yes

b. Is (6,8) a solution?

○ No
○ Yes

42. Solve the system of equations by substitution. When solving, $x = 2$ is obtained.

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

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** The solution is _____ .
   (Type an ordered pair. Simplify your answer. Use integers or fractions for any numbers in the expression.)
○ **B.** There are infinitely many solutions.
○ **C.** There is no solution.

43. Solve the system of equations using the substitution method.

$$\begin{cases} x + y = 8 \\ x = 3y \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** The solution of the system is _____ . (Type an ordered pair.)
○ **B.** There are infinitely many solutions; $\{(x,y) \mid x + y = 8\}$ or $\{(x,y) \mid x = 3y\}$.
○ **C.** There is no solution; {} or ∅.

44. Solve the system of equations by the substitution method.

$$\begin{cases} 3x - 4y = 3 \\ y = x - 1 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)
○ **B.** There are infinitely many solutions; $\{(x,y) \mid 3x - 4y = 3\}$ or $\{(x,y) \mid y = x - 1\}$.
○ **C.** There is no solution; {} or ∅.

45. Solve the system of equations by the substitution method.

$$\begin{cases} 4x + y = 19 \\ 5x - 2y = 14 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)

   ○ **B.** There are infinitely many solutions; {(x,y)|4x + y = 19} or {(x,y)|5x − 2y = 14}.

   ○ **C.** There is no solution; {} or ∅.

46. Solve the system of equations by the substitution method.

$$\begin{cases} 4x + y = 7 \\ 6x + 3y = 3 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)

   ○ **B.** There are infinitely many solutions; {(x,y)|4x + y = 7} or {(x,y)|6x + 3y = 3}.

   ○ **C.** There is no solution; {} or ∅.

47. Solve the system of equations by the substitution method.

$$\begin{cases} 5x - y = 2 \\ 5x - 2y = 9 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)

   ○ **B.** There are infinitely many solutions; {(x,y)|5x − y = 2} or {(x,y)|5x − 2y = 9}.

   ○ **C.** There is no solution; {} or ∅.

48. Solve the system of equations by the substitution method.

$$\begin{cases} 3x + 6y = 15 \\ 2x + 12y = 18 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

   ○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)

   ○ **B.** There are infinitely many solutions; {(x,y)|3x + 6y = 15} or {(x,y)|2x + 12y = 18}.

   ○ **C.** There is no solution; {} or ∅.

49. Solve the system of equations by the substitution method.

$$\begin{cases} 5x + 15y = 35 \\ 4x + 12y = 36 \end{cases}$$

Select the correct choice below and fill in any answer boxes within your choice.

- ○ **A.** The solution is _____ .
  (Simplify your answer. Type an ordered pair.)
- ○ **B.** There are infinitely many solutions; $\{(x,y)|5x + 15y = 35\}$ or $\{(x,y)|4x + 12y = 36\}$.
- ○ **C.** There is no solution; $\{\}$ or $\varnothing$.

50. Solve the system of equations by the addition method.

$$\begin{cases} 4x + y = -6 \\ -8x - 2y = 12 \end{cases}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ○ **A.** The solution is _____ . (Simplify your answer. Type an ordered pair.)
- ○ **B.** There are infinitely many solutions; $\{(x,y)|4x + y = -6\}$ or $\{(x,y)|-8x - 2y = 12\}$.
- ○ **C.** There is no solution; $\{\}$ or $\varnothing$.

51. Use the power rule, the power of a product rule, and the power of a quotient rule to simplify the expression.

$$\left(\frac{-4xz^2}{y^4} \right)^2$$

$$\left(\frac{-4xz^2}{y^4} \right)^2 = \underline{\hspace{2cm}}$$

52. Simplify the expression.

$$\left(-7b^5c^7 \right) \left(2bc^2 \right)$$

$\left(-7b^5c^7 \right) \left(2bc^2 \right) = \underline{\hspace{2cm}}$
(Type exponential notation with positive exponents. Use integers or decimals for any numbers in the expression.)

53. Simplify the expression.

$$\left(-5xyz^3 \right)^2$$

$\left(-5xyz^3 \right)^2 = \underline{\hspace{2cm}}$

54. Simplify the expression. Assume that all bases are not equal to 0.

$$\frac{5x^4y^2z}{x^2yz}$$

$$\frac{5x^4y^2z}{x^2yz} = \underline{\hspace{2cm}}$$

55. If $P(x) = x^2 + x + 1$, find $P(6)$.

$P(6) = \underline{\hspace{2cm}}$

56. An object is dropped from the top of a tower with a height of 1170 feet. Neglecting air resistance, the height of the object at time t seconds is given by the polynomial $-16t^2 + 1170$. Find the height of the object at t = 1 second.

The height of the object at 1 second is $\underline{\hspace{2cm}}$ feet.

57. The polynomial $P(x) = -24x^2 + 332x - 134$ represents the average number of visitors (in thousands) per day to a park area, where x represents the month of the year. Use this model to predict the average daily attendance at the park for the month of June $(P(6))$.

The average daily attendance at the park for the month of June is $\underline{\hspace{2cm}}$ thousand visitors.

58. Subtract.

$$\left(2y^2 + 8y - 5\right) - (-6y + 6)$$

$\left(2y^2 + 8y - 5\right) - (-6y + 6) = \underline{\hspace{2cm}}$ (Simplify your answer.)

59. Multiply.

$$(x + 5)(x + 2)$$

$(x + 5)(x + 2) = \underline{\hspace{2cm}}$ (Simplify your answer.)

60. Multiply.

$$(a + 5)(a - 8)$$

$(a + 5)(a - 8) = \underline{\hspace{2cm}}$

61. Find the following product.

$$(7y - 8)^2$$

$(7y - 8)^2 = \underline{\hspace{2cm}}$

62. Multiply.

    $(3x - 7)(4x + 4)$

    $(3x - 7)(4x + 4) =$ _____ (Simplify your answer.)

63. Multiply vertically.

    $(4x - 13)(5x + 1)$

    $(4x - 13)(5x + 1) =$ _____

64. Multiply vertically.

    $(5x + 1)(4x^2 + 4x - 1)$

    $(5x + 1)(4x^2 + 4x - 1) =$ _____ (Simplify your answer.)

65. Multiply.

    $(z + 18)(2z + 1)$

    $(z + 18)(2z + 1) =$ _____ (Simplify your answer.)

66. Multiply.

    $(a + 4)\left(a^2 - 8a + 8\right)$

    $(a + 4)\left(a^2 - 8a + 8\right) =$ _____

67. Multiply.

    $(6x - 5)^2$

    $(6x - 5)^2 =$ _____ (Simplify your answer.)

68. Multiply.

    $(a - 3)(a + 3)$

    $(a - 3)(a + 3) =$ _____ (Simplify your answer.)

69. Simplify the expression. Write the result using positive exponents only. Assume that all bases are not equal to 0.

    $$\frac{p^2 p}{p^{-5}}$$

    $\dfrac{p^2 p}{p^{-5}} =$ _____

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

$$\left(-4x^4y^{-4}\right)\left(3x^{-1}y^2\right)$$

$\left(-4x^4y^{-4}\right)\left(3x^{-1}y^2\right) = $ _____ (Type exponential notation with positive exponents.)

71. Simplify the expression. Assume that all bases are not equal to 0.

$$\left(a^{-9}b^6\right)^{-3}$$

$\left(a^{-9}b^6\right)^{-3} = $ _____ (Use positive exponents only.)

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

$$\left(\frac{x^{-1}y^3}{x^2y^6}\right)^3$$

$\left(\dfrac{x^{-1}y^3}{x^2y^6}\right)^3 = $ _____

(Simplify your answer. Use positive exponents only.)

73. Perform the division.

$$\frac{14x^8 + 8x^5}{x}$$

$\dfrac{14x^8 + 8x^5}{x} = $ _____ (Simplify your answer.)

74. Find the quotient using long division.

$$\frac{4x^2 + 39x + 27}{x + 9}$$

$\dfrac{4x^2 + 39x + 27}{x + 9} = $ _____ (Simplify your answer.)

75. Find the quotient using long division.

$$\frac{5x^2 - 6x + 2}{x - 2}$$

$\dfrac{5x^2 - 6x + 2}{x - 2} = $ _____ (Simplify your answer.)

76. Factor the trinomial completely.

$x^2 + 7x + 12$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

○ **A.** $x^2 + 7x + 12 =$ _____

○ **B.** The polynomial is prime.

77. Factor the trinomial completely.

$x^2 + 9x + 8$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

○ **A.** $x^2 + 9x + 8 =$ _____

○ **B.** The polynomial is prime.

78. Factor the trinomial completely.

$x^2 - 12x + 32$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $x^2 - 12x + 32 =$ _____ (Type your answer in factored form.)

○ **B.** The polynomial is prime.

79. Factor the trinomial completely. If the polynomial cannot be factored, say it is prime.

$x^2 + 6x + 9$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $x^2 + 6x + 9 =$ _____ (Type your answer in factored form.)

○ **B.** The polynomial is prime.

80. Factor the trinomial completely.

$x^2 - 2x - 24$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $x^2 - 2x - 24 =$ _____ (Type your answer in factored form.)

○ **B.** The polynomial is prime.

81. Factor the trinomial completely.

$x^2 + 2x - 3$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

○ **A.** $x^2 + 2x - 3 =$ _____

○ **B.** The polynomial is prime.

82. Factor the trinomial completely.

$a^2 - 11ab + 24b^2$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $a^2 - 11ab + 24b^2 =$ _____ (Factor completely.)

○ **B.** The polynomial is prime.

83. Factor the trinomial completely.

$4x^2 + 20x + 24$

Select the correct choice below and fill in any answer boxes within your choice.

○ **A.** $4x^2 + 20x + 24 =$ _____
(Factor completely.)

○ **B.** The polynomial is prime.

84. Factor the trinomial completely. Don't forget to factor out the GCF first.

$r^2 - 10r + 21$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $r^2 - 10r + 21 =$ _____

○ **B.** The polynomial is prime.

85. Factor the trinomial completely.

$5x^2 + 45x - 50$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $5x^2 + 45x - 50 =$ _____

○ **B.** The polynomial is prime.

86. Factor the trinomial completely. If the trinomial contains a greatest common factor (other than 1), factor out the GCF first.

$x^2 - 2x - 48$

Select the correct choice below and fill in any answer box within your choice.

○ **A.** $x^2 - 2x - 48 = $ _____ (Factor completely.)

○ **B.** $x^2 - 2x - 48$ is prime.

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87. Factor the following binomial completely.

$x^2 - 81$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $x^2 - 81 = $ _____ (Factor completely.)

○ **B.** The polynomial is prime.

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88. Factor the given binomial completely.

$25x^2 - 36$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $25x^2 - 36 = $ _____

○ **B.** The polynomial is prime.

---

89. Factor the following binomial completely.

$36x^2 - 121y^2$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○ **A.** $36x^2 - 121y^2 = $ _____ (Factor completely.)

○ **B.** The polynomial is prime.

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90. Solve the equation.

$(x - 1)(x - 6) = 0$

x = _____
(Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

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91. Solve the equation.

$(x - 8)(x + 6) = 0$

x = _____
(Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

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92. Solve the equation.

    $7x(x - 6) = 0$

    x = _____ (Use a comma to separate answers as needed.)

93. Solve the equation.

    $(4x - 9)(8x + 5) = 0$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

94. Solve the equation.

    $x^2 - 13x + 36 = 0$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

95. Solve.

    $x^2 + 3x - 10 = 0$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

96. Solve the equation.

    $x^2 - 4x = 21$

    x = _____
    (Use a comma to separate answers as needed.)

97. Solve.

    $x^2 = 100$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

98. Solve the equation.

    $4x^2 - 25 = 0$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

99. Solve.

    $3x^2 - 7x - 20 = 0$

    x = _____
    (Simplify your answer. Type each solution only once. Use a comma to separate answers as needed.)

1. − 6

2. 4

3. − 6

4. 80

5. − 3

6. − 63

7. − 9

8. 144

9. − 16

10. A. x = ___2___ (Type an integer or a simplified fraction.)

11. A. y = ___− 3___ (Type an integer or a simplified fraction.)

12. A. x = ___− 3___

13. A. x = ___− 3___ (Simplify your answer. Type an integer or a fraction.)

14. A. x = ___70___

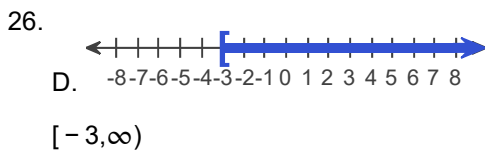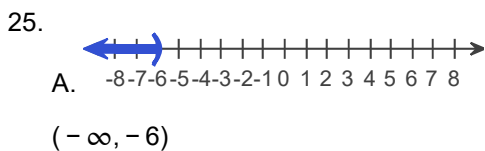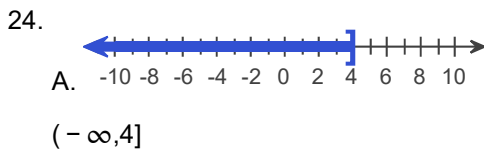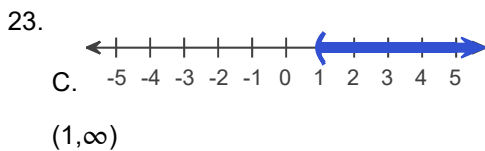15. B. The solution is all real numbers.

16. C. There is no solution.

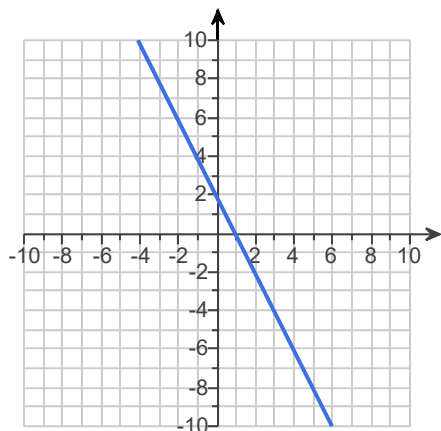17. 15

18. 4.5

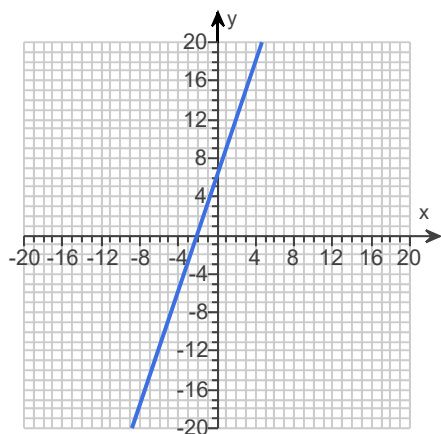19. $\dfrac{V}{QS}$

20. $5 - 8x$

21. $\dfrac{A - P}{Pt}$

22. 137.3

23.

C.

$(1,\infty)$

24.

A.

$(-\infty,4]$

25.

A.

$(-\infty,-6)$

26.

D.

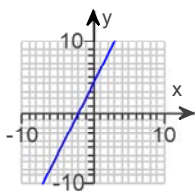$[-3,\infty)$

27. 2

   0

   − 2

28.

29.

  C.

30. A. The slope is   **6**   . (Type an integer or a simplified fraction.)

31. B. The slope is undefined.

32. A. The slope is $-\dfrac{1}{14}$. (Simplify your answer.)

33. A. The slope is _____**0**_____.(Type an integer or a fraction. Simplify your answer.)

---

34. C. Neither

---

35. A. The two lines are neither parallel nor perpendicular.

---

36. $-8x + y = -14$

---

37. $y = -7x + 8$

---

38. 22

---

39. No

Yes

---

40. No

Yes

---

41. Yes

No

---

42. A. The solution is _____**(2,4)**_____ .
    (Type an ordered pair. Simplify your answer. Use integers or fractions for any numbers in the expression.)

---

43. A. The solution of the system is _____**(6,2)**_____ . (Type an ordered pair.)

---

44. A. The solution is _____**(1,0)**_____ . (Simplify your answer. Type an ordered pair.)

---

45. A. The solution is _____**(4,3)**_____ . (Simplify your answer. Type an ordered pair.)

---

46. A. The solution is _____**(3, − 5)**_____ . (Simplify your answer. Type an ordered pair.)

---

47. A. The solution is _____**(− 1, − 7)**_____ . (Simplify your answer. Type an ordered pair.)

---

48. A. The solution is _____**(3,1)**_____ . (Simplify your answer. Type an ordered pair.)

---

49. C. There is no solution; {} or ∅.

50. B. There are infinitely many solutions; $\{(x,y)\,|\,4x + y = -6\}$ or $\{(x,y)\,|\,-8x - 2y = 12\}$.

51. $\dfrac{16x^2z^4}{y^8}$

52. $-14b^6c^9$

53. $25x^2y^2z^6$

54. $5x^2y$

55. 43

56. 1154

57. 994

58. $2y^2 + 14y - 11$

59. $x^2 + 7x + 10$

60. $a^2 - 3a - 40$

61. $49y^2 - 112y + 64$

62. $12x^2 - 16x - 28$

63. $20x^2 - 61x - 13$

64. $20x^3 + 24x^2 - x - 1$

65. $2z^2 + 37z + 18$

66. $a^3 - 4a^2 - 24a + 32$

67. $36x^2 - 60x + 25$

68. $a^2 - 9$

69. p^8

70.
$$-\frac{12x^3}{y^2}$$

71.
$$\frac{a^{27}}{b^{18}}$$

72.
$$\frac{1}{x^9 y^9}$$

73. $14x^7 + 8x^4$

74. $4x + 3$

75.
$$5x + 4 + \frac{10}{x - 2}$$

76. A. $x^2 + 7x + 12 =$ __**(x + 3)(x + 4)**__

77. A. $x^2 + 9x + 8 =$ __**(x + 8)(x + 1)**__

78. A. $x^2 - 12x + 32 =$ __**(x − 4)(x − 8)**__ (Type your answer in factored form.)

79. A. $x^2 + 6x + 9 =$ __**(x + 3)(x + 3)**__ (Type your answer in factored form.)

80. A. $x^2 - 2x - 24 =$ __**(x + 4)(x − 6)**__ (Type your answer in factored form.)

81. A. $x^2 + 2x - 3 =$ __(x + 3)(x − 1)__

82. A. $a^2 - 11ab + 24b^2 =$ __(a − 8b)(a − 3b)__ (Factor completely.)

83. A. $4x^2 + 20x + 24 =$ __4(x + 3)(x + 2)__ (Factor completely.)

84. A. $r^2 - 10r + 21 =$ __(r − 3)(r − 7)__

85. A. $5x^2 + 45x - 50 =$ __5(x + 10)(x − 1)__

86. A. $x^2 - 2x - 48 =$ __(x − 8)(x + 6)__ (Factor completely.)

87. A. $x^2 - 81 =$ __(x + 9)(x − 9)__ (Factor completely.)

88. A. $25x^2 - 36 =$ __(5x + 6)(5x − 6)__

89. A. $36x^2 - 121y^2 =$ __(6x + 11y)(6x − 11y)__ (Factor completely.)

90. 1,6

91. 8, − 6

92. 6,0

93. $\frac{9}{4}, -\frac{5}{8}$

94. 4,9

95. − 5,2

96. 7, − 3

97. − 10,10

98. $\dfrac{5}{2}, -\dfrac{5}{2}$

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99. $-\dfrac{5}{3}, 4$