

Student: _____
Date: _____

Instructor: Alfredo Alvarez
Course: Math 0320 17-20 (1)

Assignment: Math 0410 Homework

1. Simplify.

$$(-13 - 43) \div 14 - 28$$

$$(-13 - 43) \div 14 - 28 = \underline{\hspace{2cm}}$$

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

$$7w - 10w = 27$$

$$w = \underline{\hspace{2cm}}$$

3. Solve the equation.

$$3x - 2 = 4x + 3$$

$$x = \underline{\hspace{2cm}}$$

4. Solve the equation.

$$7x + 18 = 3x - 26$$

$$\text{The solution is } x = \underline{\hspace{2cm}}.$$

5. Solve the following equation.

$$23 - 14 = 3(x - 1)$$

$$x = \underline{\hspace{2cm}}$$

6. Solve the equation.

$$3(y - 4) = y - 12$$

$$y = \underline{\hspace{2cm}}$$

7. Solve the equation.

$$5(6x - 1) = 31x$$

$$x = \underline{\hspace{2cm}}$$

8. Subtract.

$$\frac{1}{8} - \frac{3}{10}$$

$$\frac{1}{8} - \frac{3}{10} = \underline{\hspace{2cm}} \quad (\text{Type an integer or a fraction.})$$

9. Solve the equation.

$$\frac{2}{9} + y = -\frac{7}{18}$$

y = _____ (Type an integer or a fraction. Simplify your answer.)

10. Solve the equation.

$$\frac{1}{3} - \frac{5}{4} = \frac{z}{12}$$

z = _____ (Type an integer or a fraction. Simplify your answer.)

11. Solve the equation.

$$\frac{x}{7} = \frac{x}{5} + 6$$

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

12. Solve the equation.

$$\frac{x}{3} = \frac{x}{6} + \frac{1}{2}$$

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

13. Solve.

$$4.1x - 71 = 2.9x + 7$$

x = _____ (Type an integer or a decimal.)

14. Solve.

$$-0.3x + 6.52 = -0.5x + 2.92$$

x = _____ (Type an integer or a decimal.)

15. The purchase price of a camcorder is \$708. What is the total price if the sales tax rate is 7.5%?

The total price is \$ _____.

16. Find the amount of discount and the sale price.

Original Price	Discount Rate	Amount of Discount	Sale Price
\$25,500.00	5%	-	-

The amount of discount is \$ _____.

The sale price is \$ _____.

17. A stereo normally priced at \$430 is on sale for 25% off. Find the discount and the sale price.

The discount is \$ _____.

The sale price is \$ _____.

18. A company borrows \$75,000 for 6 years at a simple interest rate of 9.5%. Find the interest paid on the loan and the total amount paid.

The interest paid on the loan is \$ _____.

The total amount paid is \$ _____.

19. Solve the equation for x.

$$7(x + 5) - 8 = 27$$

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.

20. Solve the equation for x.

$$7(7x + 8) = 49x + 56$$

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.

21. Solve the equation.

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

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.

22. Solve the equation for x.

$$6x - 4 = 6(x - 9)$$

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.

23. Solve the equation for x.

$$-6(6x - 8) + 8 = -36x + 56$$

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.

24. Solve the equation for y.

$$9x + y = 7$$

$y =$ _____

25. Solve the formula for the specified variable.

$$W = X + Xyz \text{ for } y$$

$y =$ _____

26. The formula for the perimeter of a rectangle is $P = 2L + 2W$. You are given the perimeter and the width of the rectangle, and wish to solve for the length. Which of the following formulas is the correct solution for the length of the rectangle?

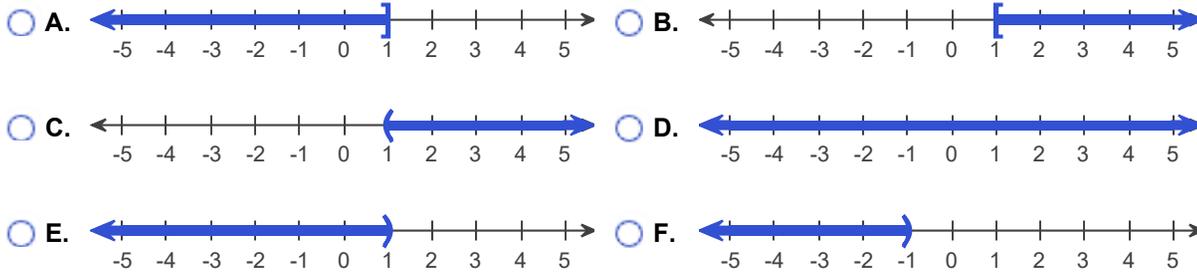
Choose the correct answer below.

- A. $L = \frac{P + 2W}{2}$
- B. $L = \frac{P}{2} + W$
- C. $L = \frac{P - W}{2}$
- D. $L = \frac{P}{2} - W$

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

$$8x - 4 > 7x - 3$$

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

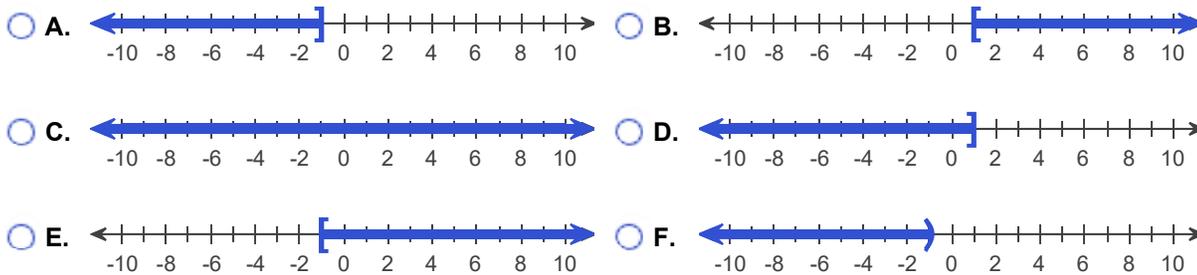


The solution to the inequality $8x - 4 > 7x - 3$ is _____.
(Type your answer in interval notation.)

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

$$2x - 1 \leq 8x - 7x$$

Choose the graph of the solution set.

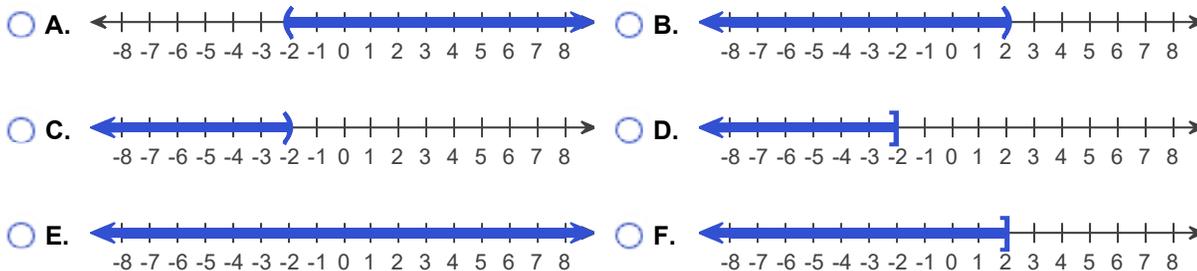


The solution to the inequality $2x - 1 \leq 8x - 7x$ is _____.
(Type your answer in interval notation.)

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

$$3x < -6$$

Choose the correct graph below.

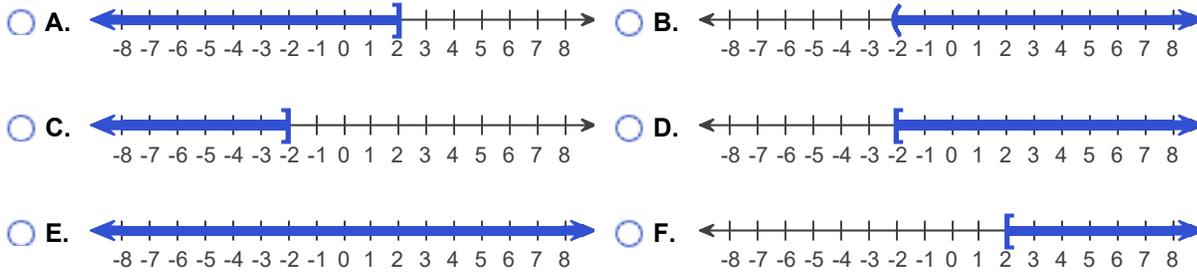


The solution to the inequality $3x < -6$ is _____.
(Type your answer in interval notation.)

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

$$-9x \leq 18$$

Choose the correct graph below.



The solution to the inequality $-9x \leq 18$ is _____.
(Type your answer in interval notation.)

31. Solve the inequality.

$$2x - 6 < 5x + 9$$

The solution set is _____. (Type your answer in interval notation.)

32. Solve the inequality.

$$-10x + 6 \geq 6(3 - x)$$

The solution set is _____. (Type your answer in interval notation.)

33. Solve the inequality.

$$8(x - 7) < 3(3x - 3)$$

The solution set is _____. (Type your answer in interval notation.)

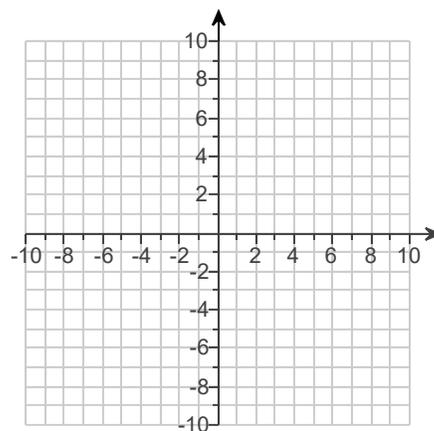
34. For the following equation, find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

$$y = -4x + 3$$

Find three ordered pair solutions of the given equation.

x	y
0	
1	
2	

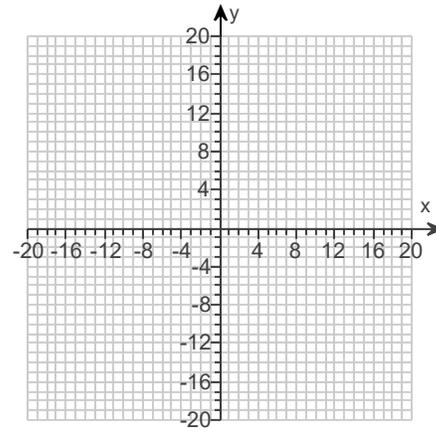
Use the graphing tool to graph the line.



35. Graph the equation.

$$y = 4x + 2$$

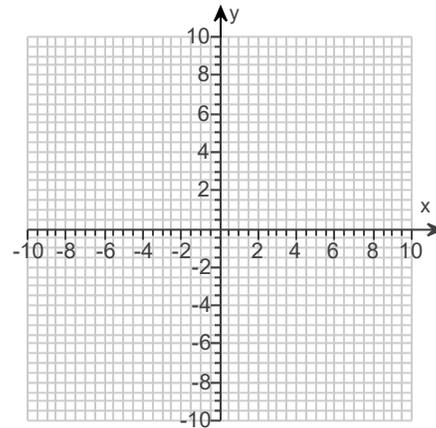
Use the graphing tool to graph the line.



36. Graph the linear equation.

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

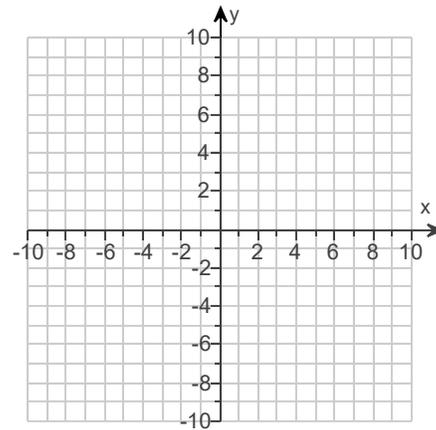
Use the graphing tool to graph the linear equation.



37. Graph the linear equation.

$$4x - 2y = 8$$

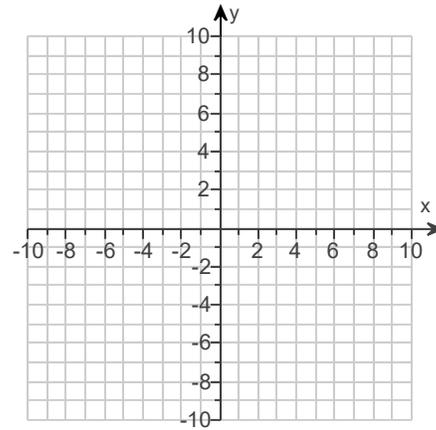
Use the graphing tool to graph the linear equation.



38. Plot the intercepts to graph the equation.

$$5x - 4y = -20$$

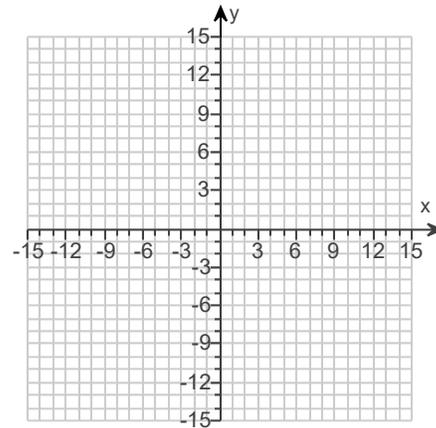
Use the graphing tool to graph the equation. Use the intercepts when drawing the line. If only one intercept exists, use it and another point to draw the line.



39. Graph using the x- and y-intercepts.

$$y = 7x + 7$$

Use the graphing tool to graph the linear equation. Use the intercepts when drawing the line. If only one intercept exists, use it and another point to draw the line.

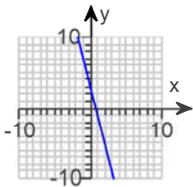


40. Match the equation with its graph.

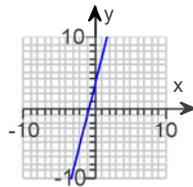
$$y = 4x + 3$$

Choose the correct graph below.

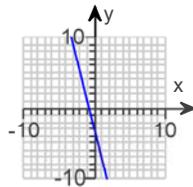
A.



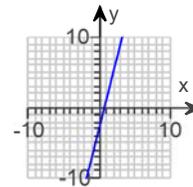
B.



C.



D.



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

$$(1, -7) \text{ and } (0, -10)$$

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.

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

$$(-6, -4) \text{ and } (-6, 5)$$

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.

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

$$(-2, 2) \text{ and } (-5, -3)$$

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.

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

$$(4, 4) \text{ and } (-2, 4)$$

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 fraction. Simplify your answer.)
- B. The slope is undefined.

45. Find the slope of the line.

$$y = 4x - 8$$

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

- A. The slope is _____.
- B. The slope is undefined.

46. Find the slope of the line.

$$2x + y = 6$$

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

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

47. Find the slope of the line.

$$2x - 9y = 18$$

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

- A. The slope of the line is _____. (Simplify your answer.)
- B. The slope of the line is undefined.

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

$$y = \frac{8}{7}x + 7$$

$$y = -\frac{8}{7}x$$

Choose the correct answer below.

- A. Perpendicular
 B. Neither
 C. Parallel
-

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

$$x - 5y = -7$$

$$y = 6x - 9$$

Choose the correct answer below.

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

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

$$5x = 3y + 4$$

$$-25x + 15y = 4$$

Choose the correct answer below.

- A. Parallel
 B. Perpendicular
 C. Neither
-

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

$$8 + 9x = 6y$$

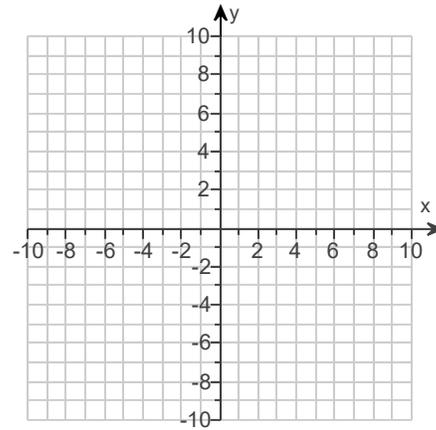
$$6x + 9y = 2$$

Choose the correct answer below.

- A. These two lines are parallel.
 B. These two lines are neither parallel nor perpendicular.
 C. These two lines are perpendicular.
-

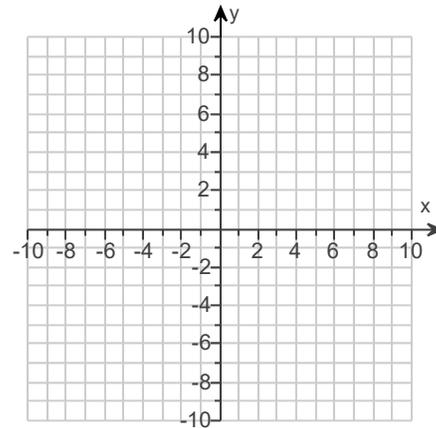
52. Use the slope-intercept form to graph the equation $y = 9x - 5$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



53. Use the slope-intercept form to graph the equation $4x + 5y = 20$.

Use the graphing tool to graph the line. Use the slope and y-intercept when drawing the line.



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

$$m = 6, b = 1$$

The equation is _____.

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

55. Find the slope-intercept form of the line whose slope is 4 and that passes through the point $(-5, 7)$.

The equation of the line is _____.

(Type your answer in slope-intercept form.)

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

Slope -6 and y-intercept $(0, 3)$

The equation is _____.

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

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

$$x = -3$$

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

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

$$\begin{cases} 3x - y = 14 \\ x + 3y = 8 \end{cases}$$

a. (6,4)

b. (5,1)

a. Is (6,4) a solution?

- No
 Yes

b. Is (5,1) a solution?

- Yes
 No

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

$$\begin{cases} 5x - y = 18 \\ 6x + y = 26 \end{cases}$$

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; $\{(x,y)|5x - y = 18\}$ or $\{(x,y)|6x + y = 26\}$.
 C. There is no solution; $\{\}$ or \emptyset .

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

$$\begin{cases} x - 2y = 1 \\ -x + 4y = 1 \end{cases}$$

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; $\{(x,y)|x - 2y = 1\}$ or $\{(x,y)|-x + 4y = 1\}$.
 C. There is no solution; $\{\}$ or \emptyset .

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

$$\begin{cases} 5x + y = -3 \\ 7x - 2y = -79 \end{cases}$$

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; $\{(x,y)|5x + y = -3\}$ or $\{(x,y)|7x - 2y = -79\}$.
 C. There is no solution; $\{\}$ or \emptyset .

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

$$\begin{cases} x + 3y = 0 \\ 4x + 5y = -7 \end{cases}$$

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

- A. The solution is _____. (Simplify your answer. Type an ordered pair.)
- B. There are infinitely many solutions; $\{(x,y)|x + 3y = 0\}$ or $\{(x,y)|4x + 5y = -7\}$.
- C. There is no solution; $\{\}$ or \emptyset .

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

$$\begin{cases} 4x + 2y = 2 \\ 8x + 4y = 0 \end{cases}$$

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; $\{(x,y)|4x + 2y = 2\}$ or $\{(x,y)|8x + 4y = 0\}$.
- C. There is no solution; $\{\}$ or \emptyset .

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

$$\begin{cases} -4x + y = 0 \\ 16x - 4y = 0 \end{cases}$$

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; $\{(x,y)|-4x + y = 0\}$ or $\{(x,y)|16x - 4y = 0\}$.
- C. There is no solution; $\{\}$ or \emptyset .

65. If $P(x) = x^2 + x + 1$, find $P(8)$.

$P(8) =$ _____

66. Subtract.

$$(6y^2 + 8y - 7) - (-6y + 8)$$

$$(6y^2 + 8y - 7) - (-6y + 8) = \text{_____} \text{ (Simplify your answer.)}$$

67. Multiply.

$$(a + 5)(a - 6)$$

$$(a + 5)(a - 6) = \text{_____}$$

68. Find the following product.

$$(2y + 1)^2$$

$$(2y + 1)^2 = \underline{\hspace{2cm}}$$

69. Multiply.

$$(5x - 6)(4x + 2)$$

$$(5x - 6)(4x + 2) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

70. Multiply.

$$(x - 4)(x^2 - 7x + 5)$$

$$(x - 4)(x^2 - 7x + 5) = \underline{\hspace{2cm}}$$

71. Find the following product.

$$(8a + 1)(7a^2 - 2a + 5)$$

$$(8a + 1)(7a^2 - 2a + 5) = \underline{\hspace{2cm}}$$

72. Multiply vertically.

$$(4x - 11)(6x + 1)$$

$$(4x - 11)(6x + 1) = \underline{\hspace{2cm}}$$

73. Multiply.

$$(2x + 2)(4x + 4)$$

$$(2x + 2)(4x + 4) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

74. Find the product using the FOIL method.

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

$$(x - 6)(x + 8) = \underline{\hspace{2cm}}$$

75. Multiply using the FOIL method.

$$5(y - 2)(7y - 1)$$

$$5(y - 2)(7y - 1) = \underline{\hspace{2cm}}$$

76. Multiply.

$$(6x - 5)^2$$

$$(6x - 5)^2 = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

77. Multiply.

$$(a - 10)(a + 10)$$

$$(a - 10)(a + 10) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

78. Find the product.

$$(9x - 9)(9x + 9)$$

$$(9x - 9)(9x + 9) = \underline{\hspace{2cm}}$$

79. Multiply.

$$(7x + y)(7x - y)$$

$$(7x + y)(7x - y) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

80. Find the product.

$$(5x - 3)(5x + 8)$$

$$(5x - 3)(5x + 8) = \underline{\hspace{2cm}}$$

81. Multiply.

$$(x + 7)(x - 7)$$

$$(x + 7)(x - 7) = \underline{\hspace{2cm}}$$

82. Multiply.

$$(x - 3)(x^2 - 6x + 7)$$

$$(x - 3)(x^2 - 6x + 7) = \underline{\hspace{2cm}}$$

83. Find the product.

$$(8x - 2)(8x + 2)$$

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

84. Simplify the following expression.

$$5^{-2}$$

$$5^{-2} = \underline{\hspace{2cm}} \text{ (Type an integer or a simplified fraction.)}$$

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

$$(a^{-6}b^5)^{-5}$$

$$(a^{-6}b^5)^{-5} = \underline{\hspace{2cm}} \text{ (Use positive exponents only.)}$$

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

$$\left(\frac{x^{-4}y^2}{x^2y^{10}}\right)^3$$

$$\left(\frac{x^{-4}y^2}{x^2y^{10}}\right)^3 = \underline{\hspace{2cm}}$$

(Simplify your answer. Use positive exponents only.)

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

$$\frac{5^7z^{-1}}{5^8z^{-4}}$$

$$\frac{5^7z^{-1}}{5^8z^{-4}} = \underline{\hspace{2cm}}$$

88. Simplify the following expression. Write the result using positive exponents.

$$\frac{(-4xy^{-3})^{-5}}{(xy^{-3})^{-3}}$$

$$\frac{(-4xy^{-3})^{-5}}{(xy^{-3})^{-3}} = \underline{\hspace{2cm}}$$

(Simplify your answer. Use integers or fractions for any numbers in the expression.)

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

$$\frac{(a^2b^{-2})^{-5}}{(3a^2b^{-1})^{-2}}$$

$$\frac{(a^2b^{-2})^{-5}}{(3a^2b^{-1})^{-2}} = \underline{\hspace{2cm}}$$

90. Use synthetic division to divide.

$$(x^2 - 8x - 33) \div (x + 3)$$

$$(x^2 - 8x - 33) \div (x + 3) = \underline{\hspace{2cm}}$$

91. Divide using synthetic division.

$$(8x^2 + 11x + 10) \div (x + 1)$$

$$(8x^2 + 11x + 10) \div (x + 1) = \underline{\hspace{2cm}}$$

92. Factor the following polynomial.

$$-64x^5y^7 - 40x^7y^6$$

$$-64x^5y^7 - 40x^7y^6 = \underline{\hspace{2cm}} \text{ (Factor completely.)}$$

93. Factor the trinomial completely.

$$x^2 + 12x + 27$$

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

- A. $x^2 + 12x + 27 = \underline{\hspace{2cm}}$
- B. The polynomial is prime.

94. Factor the trinomial completely.

$$x^2 - 10x + 24$$

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

- A. $x^2 - 10x + 24 = \underline{\hspace{2cm}}$ (Type your answer in factored form.)
- B. The polynomial is prime.

95. Factor the trinomial completely.

$$x^2 - x - 20$$

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

- A. $x^2 - x - 20 = \underline{\hspace{2cm}}$ (Type your answer in factored form.)
- B. The polynomial is prime.

96. Factor the following binomial completely.

$$121x^2 - 49y^2$$

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

- A. $121x^2 - 49y^2 = \underline{\hspace{2cm}}$ (Factor completely.)
- B. The polynomial is prime.

97. Solve the equation.

$$(x - 7)(x - 1) = 0$$

$$x = \underline{\hspace{2cm}}$$

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

98. Solve the equation.

$$(x - 3)(x + 9) = 0$$

$$x = \underline{\hspace{2cm}}$$

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

99. Solve the equation.

$$x(x + 1) = 0$$

$$x = \underline{\hspace{2cm}}$$

(Use a comma to separate answers as needed.)

100. Solve the equation.

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

$$x = \underline{\hspace{2cm}}$$

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

101. Solve the equation.

$$x^2 - 12x + 32 = 0$$

$$x = \underline{\hspace{2cm}}$$

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

1. -32

2. -9

3. -5

4. -11

5. 4

6. 0

7. -5

8. $-\frac{7}{40}$

9. $-\frac{11}{18}$

10. -11

11. -105

12. 3

13. 65

14. -18

15. 761.10

16. 1,275.00
24,225.00

17. 107.50

322.50

18. 42,750

117,750

19. A. $x = \underline{\quad 0 \quad}$ (Simplify your answer. Type an integer or a fraction.)

20. B. The solution is all real numbers.

21. C. There is no solution.

22. C. There is no solution.

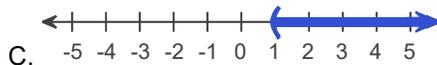
23. B. The solution is all real numbers.

24. $7 - 9x$

25. $\frac{W - X}{Xz}$

26. D. $L = \frac{P}{2} - W$

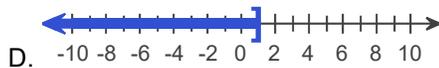
27.



C. -5 -4 -3 -2 -1 0 1 2 3 4 5

$(1, \infty)$

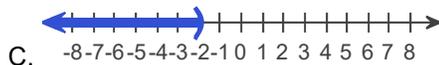
28.



D. -10 -8 -6 -4 -2 0 2 4 6 8 10

$(-\infty, 1]$

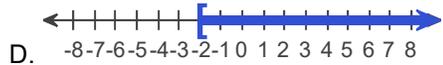
29.



C. -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8

$(-\infty, -2]$

30.



D.

$$[-2, \infty)$$

31. $(-5, \infty)$

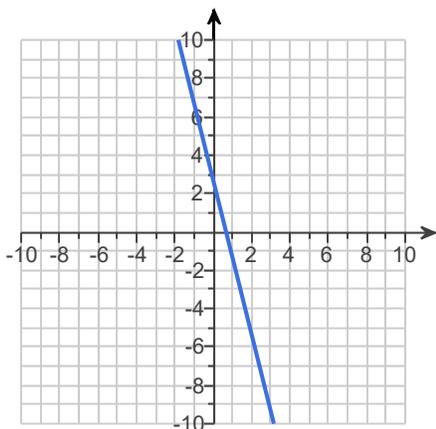
32. $(-\infty, -3]$

33. $(-47, \infty)$

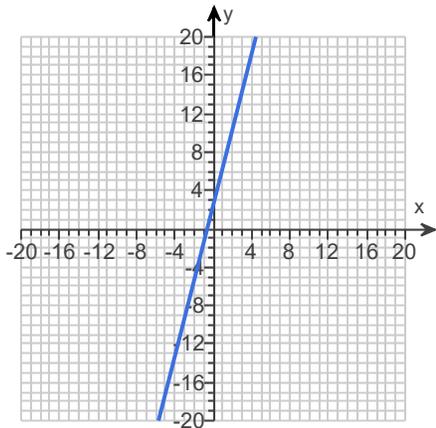
34. 3

- 1

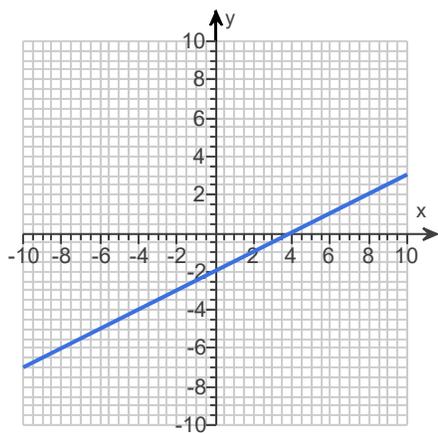
- 5



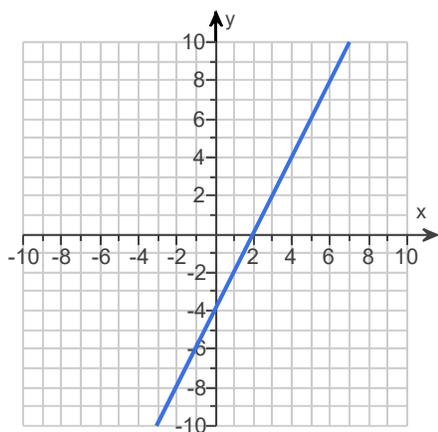
35.



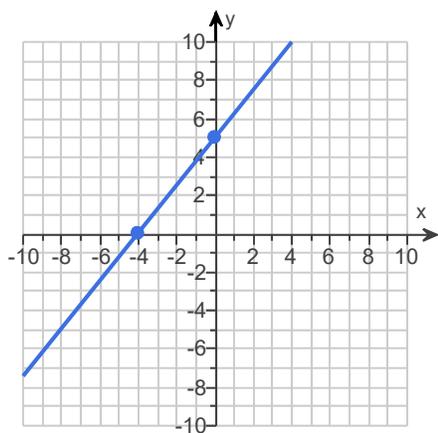
36.



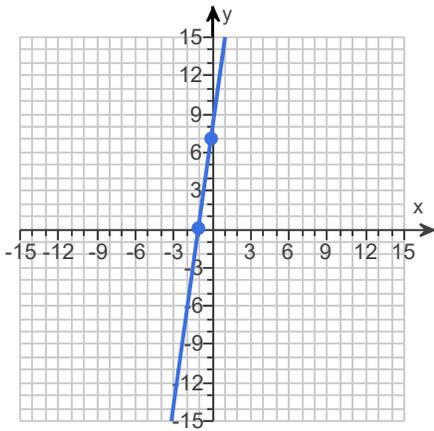
37.



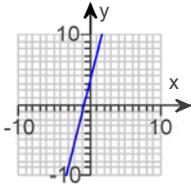
38.



39.



40.



B.

41. A. The slope is 3. (Type an integer or a simplified fraction.)

42. B. The slope is undefined.

43. A. The slope is $\frac{5}{3}$. (Simplify your answer.)

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

45. A. The slope is 4.

46. A. The slope is -2. (Simplify your answer. Type an integer or a fraction.)

47. A. The slope of the line is $\frac{2}{9}$. (Simplify your answer.)

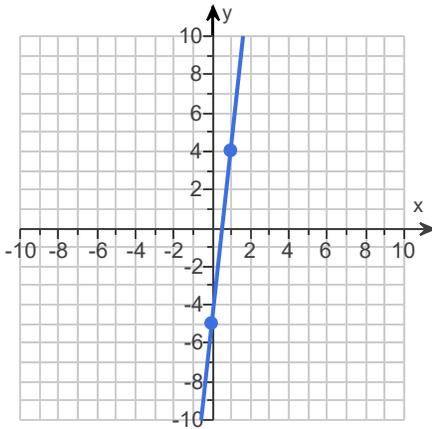
48. B. Neither

49. C. The two lines are neither parallel nor perpendicular.

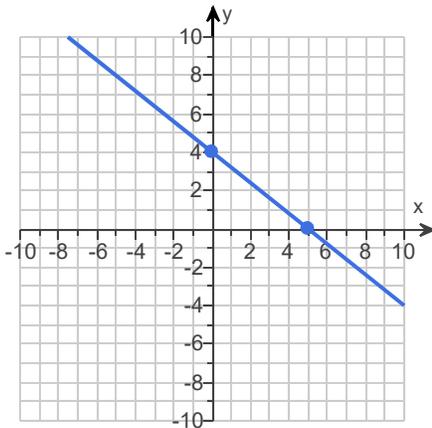
50. A. Parallel

51. C. These two lines are perpendicular.

52.



53.



54. $y = 6x + 1$

55. $y = 4x + 27$

56. $y = -6x + 3$

57. 23

58. No

Yes

59. A. The solution is (4,2). (Simplify your answer. Type an ordered pair.)

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

61. A. The solution is **(-5,22)** . (Simplify your answer. Type an ordered pair.)

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

63. C. There is no solution; {} or \emptyset .

64. B. There are infinitely many solutions; $\{(x,y) \mid -4x + y = 0\}$ or $\{(x,y) \mid 16x - 4y = 0\}$.

65. 73

66. $6y^2 + 14y - 15$

67. $a^2 - a - 30$

68. $4y^2 + 4y + 1$

69. $20x^2 - 14x - 12$

70. $x^3 - 11x^2 + 33x - 20$

71. $56a^3 - 9a^2 + 38a + 5$

72. $24x^2 - 62x - 11$

73. $8x^2 + 16x + 8$

74. $x^2 + 2x - 48$

75. $35y^2 - 75y + 10$

76. $36x^2 - 60x + 25$

$$77. a^2 - 100$$

$$78. 81x^2 - 81$$

$$79. 49x^2 - y^2$$

$$80. 25x^2 + 25x - 24$$

$$81. x^2 - 49$$

$$82. x^3 - 9x^2 + 25x - 21$$

$$83. 64x^2 - 4$$

$$84. \frac{1}{25}$$

$$85. \frac{a^{30}}{b^{25}}$$

$$86. \frac{1}{x^{18}y^{24}}$$

$$87. \frac{z^3}{5}$$

$$88. -\frac{y^6}{1024x^2}$$

$$89. \frac{9b^8}{a^6}$$

$$90. x - 11$$

91. $8x + 3 + \frac{7}{x+1}$

92. $8x^5y^6(-8y - 5x^2)$

93. A. $x^2 + 12x + 27 = \underline{(x+3)(x+9)}$

94. A. $x^2 - 10x + 24 = \underline{(x-4)(x-6)}$ (Type your answer in factored form.)

95. A. $x^2 - x - 20 = \underline{(x+4)(x-5)}$ (Type your answer in factored form.)

96. A. $121x^2 - 49y^2 = \underline{(11x+7y)(11x-7y)}$ (Factor completely.)

97. 7,1

98. 3, -9

99. 0, -1

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

101. 8,4
