Student: _____	**Instructor:** Alfredo Alvarez	**Assignment:** Math 0410 WARM UP 37ez101
Date: _____	**Course:** Math 0410 / 0320 Alvarez	

1. Add.

$-40+39$

$-40+39=$ ☐

Answer: -1

---

2. Subtract.

$-5-(-7)$

$-5-(-7)=$ ☐

Answer: 2

---

3. Perform the subtraction.

$-23-24$

$-23-24=$ ☐

Answer: -47

---

4. Multiply.

$-2(-1)$

$-2(-1)=$ ☐

Answer: 2

---

5. Multiply.

$-6(9)$

$-6(9)=$ ☐

Answer: -54

---

6. Multiply.

$6(-6)$

$6(-6)=$ ☐

Answer: -36

---

7. Multiply.

$0(-14)$

$0(-14) =$ ☐

Answer: 0

---

8. Multiply.

$6(-4)(-3)$

$6(-4)(-3) =$ ☐

Answer: 72

---

9. Evaluate.

-10^2

$-10^2 =$ ☐

Answer: -100

---

10. Evaluate.

$(-11)^3$

$(-11)^3 =$ ☐

Answer: -1331

---

11. Evaluate.

-8^2

$-8^2 =$ ☐

Answer: -64

---

12. Evaluate.

$(-6)^2$

$(-6)^2 =$ ☐

Answer: 36

---

13. Find the quotient.

$$\frac{-84}{-12}$$

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

- **A.** $\frac{-84}{-12} =$ _____
- **B.** The answer is undefined.

Answer: A. $\frac{-84}{-12} =$ **7**

14. Find the quotient.

$$\frac{0}{-20}$$

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

- **A.** $\frac{0}{-20} =$ _____
- **B.** The answer is undefined.

Answer: A. $\frac{0}{-20} =$ **0**

15. Find the quotient.

$$\frac{8}{0}$$

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

- **A.** $\frac{8}{0} =$ _____
- **B.** The answer is undefined.

Answer: B. The answer is undefined.

16. Multiply.

$-3(-2)(-5)$

$-3(-2)(-5) =$ [ ]

Answer: -30

17. Evaluate.

$(-12)^2$

$(-12)^2 =$ ☐

Answer: 144

---

18. Simplify.

$6 + 7(-5)$

$6 + 7(-5) =$ ☐

Answer: -29

---

19. Simplify.

$8(-3) + 5$

$8(-3) + 5 =$ ☐

Answer: -19

---

20. Simplify.

$(-9) + 9 \div 3$

$(-9) + 9 \div 3 =$ ☐

Answer: -6

---

21. Simplify.

$2 + 9 \cdot 4 - 12$

$2 + 9 \cdot 4 - 12 =$ ☐

Answer: 26

---

22. Simplify.

$(-17 - 11) \div 14 - 27$

$(-17 - 11) \div 14 - 27 =$ ☐

Answer: -29

---

23. Evaluate the following expression for $x = -3$, $y = 2$, and $z = -1$.

$4x - 3y - 12z$

$4x - 3y - 12z =$ ☐

Answer: -6

---

24. Evaluate the following expression for $x = -3$ and $y = 2$.

$x^2 - y$

$x^2 - y =$ ☐

Answer: 7

---

25. Solve. Check your solution.

$x + 2 = 20$

The solution is $x =$ ☐.

Answer: 18

---

26. Solve. Check your solution.

$d - 6 = -15$

The solution is $d =$ ☐.

Answer: -9

---

27. Solve. Check your solution.

$10 = y - 7$

The solution is $y =$ ☐.

Answer: 17

---

28. Solve the following equation. Check the solution.

$-3 + 10 - 16 = x$

The solution is ☐.

Answer: -9

---

29. Solve.

$8x = 32$

The solution is $x =$ ☐.

Answer: 4

---

30. Solve.

$-4z = 24$

The solution is $z =$ ☐.

Answer: -6

---

31. Solve.

$11z = -99$

The solution is $z =$ ☐.

Answer: -9

---

32. Solve.

$-4x = 0$

The solution is $x =$ ☐.

Answer: 0

---

33. Solve.

$-13x = -13$

The solution is $x =$ ☐.

Answer: 1

---

34. Solve.

$8z = -32$

The solution is $z =$ ☐.

Answer: -4

---

35. Solve. Check your solution.

$d - 10 = -1$

The solution is $d =$ ____.

Answer: 9

---

36. Solve. Check your solution.

$-21 = x + 8$

The solution is $x =$ ____.

Answer: -29

---

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

$x - 6 = -5 + 8$

The solution is $x =$ ____.

Answer: 9

---

38. Solve. Check your solution.

$-18 + 24 = m - 8$

$m =$ ____

Answer: 14

---

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

$2w - 4w = 4$

$w =$ ____

Answer: -2

---

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

$63 = t + 8t$

The solution is $t =$ ____.

Answer: 7

---

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

$2z = 18 - 22$

The solution is $z =$ [ ].

Answer: -2

---

42. Solve and check the solution.

$5(3x - 2) = 16x$

$x =$ [ ]

Answer: -10

---

43. Solve the equation $13y = 12(y + 10)$.

$y =$ [ ]

Answer: 120

---

44. Solve. First multiply to remove parentheses.

$31y = 5(6y - 7)$

The solution is $y =$ [ ].

Answer: -35

---

45. Solve. First multiply to remove parentheses.

$-2(-4 - 3z) = 7z$

$z =$ [ ]

Answer: 8

---

46. Solve the following equation.

$3x - 15 = 0$

$x =$ [ ]

Answer: 5

---

47. Solve the equation.

$5n + 10 = 15$

$n =$ ☐

Answer: 1

---

48. Solve the equation.

$-4 = 3x - 1$

The solution is $x =$ ☐.

Answer: -1

---

49. Solve the equation.

$y - 12 = 5y$

The solution is $y =$ ☐.

Answer: -3

---

50. Solve the equation $10y = 3(3y + 19)$.

$y =$ ☐

Answer: 57

---

51. Solve the equation.

$6x = 3(7x + 10)$

The solution is $x =$ ☐.

Answer: -2

---

52. Solve the equation.

$5(y - 2) = 2y - 10$

$y =$ ☐

Answer: 0

---

53. Solve the equation.

$3(7x - 3) = 22x$

$x =$ ☐

Answer: -9

---

54. Subtract.

$\frac{5}{6} - \frac{7}{8}$

$\frac{5}{6} - \frac{7}{8} =$ ☐ (Type an integer or a fraction.)

Answer: $-\frac{1}{24}$

---

55. Solve the equation and check the solution.

$\frac{1}{6}x = 5$

$x =$ ☐

Answer: 30

---

56. Solve the equation.

$\frac{k}{6} + 3 = \frac{7}{6}$

$k =$ ☐ (Type an integer or a fraction. Simplify your answer.)

Answer: -11

---

57. Solve the equation.

$\frac{1}{5} - \frac{3}{2} = \frac{y}{10}$

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

Answer: -13

---

58. Solve.

$3.5x - 69 = 2.3x + 9$

$x =$ [ ] (Type an integer or a decimal.)

Answer: 65

---

59. A stereo normally priced at $589 is on sale for 10% off. Find the discount and the sale price.

The discount is $[ ].

The sale price is $[ ].

Answers 58.90

530.10

---

60. A company borrows $96,000 for 10 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 $[ ].

Answers 91,200

187,200

---

61. Solve the equation for x.

$-6(x + 8) - 4 = -52$

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.

Answer: A. $x =$ [**0**] (Simplify your answer. Type an integer or a fraction.)

---

62. Solve the equation for x.

$2(4x - 2) = 8x - 4$

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.

Answer: B. The solution is all real numbers.

---

63. Solve the equation.

$\frac{x}{4} + 5 = \frac{x}{4}$

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.

Answer: C. There is no solution.

---

64. Solve the equation for y.

$7x + y = 9$

y = [ ]

Answer: $9 - 7x$

---

65. Solve the formula for the specified variable.

$A = B + Bcd$ for c

c = [ ]

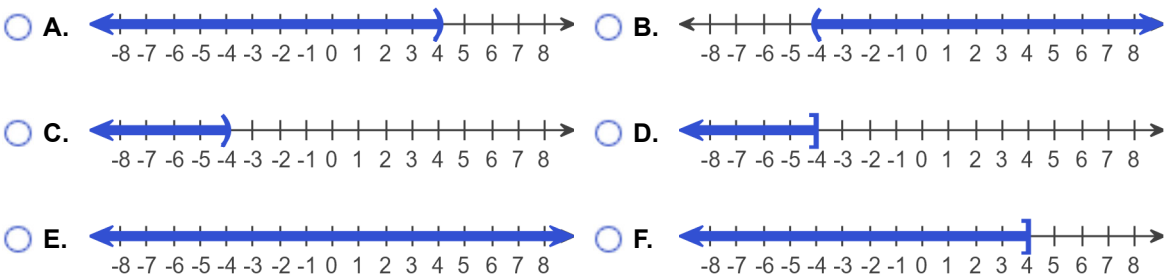
Answer: $\frac{A - B}{Bd}$

---

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

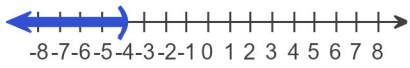
$2x < -8$

Choose the correct graph below.



The solution to the inequality $2x < -8$ is [ ].
(Type your answer in interval notation.)

Answers

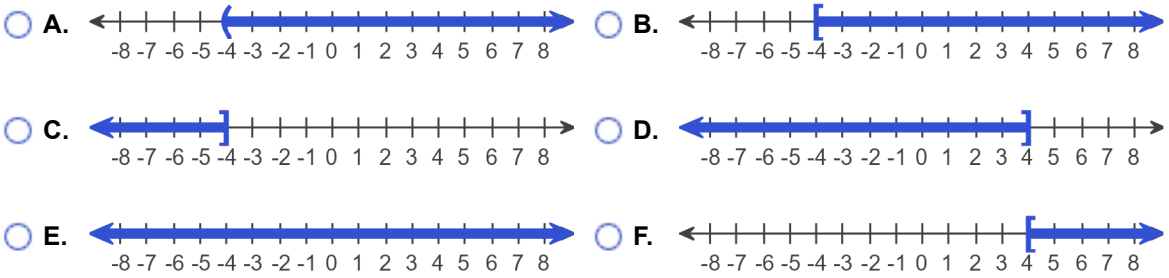


$(-\infty, -4)$

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

$-7x \leq 28$

Choose the correct graph below.



The solution to the inequality $-7x \leq 28$ is [ ].
(Type your answer in interval notation.)

Answers

$[-4, \infty)$

68. Solve the inequality.

$-6x + 4 \geq 4(3 - x)$

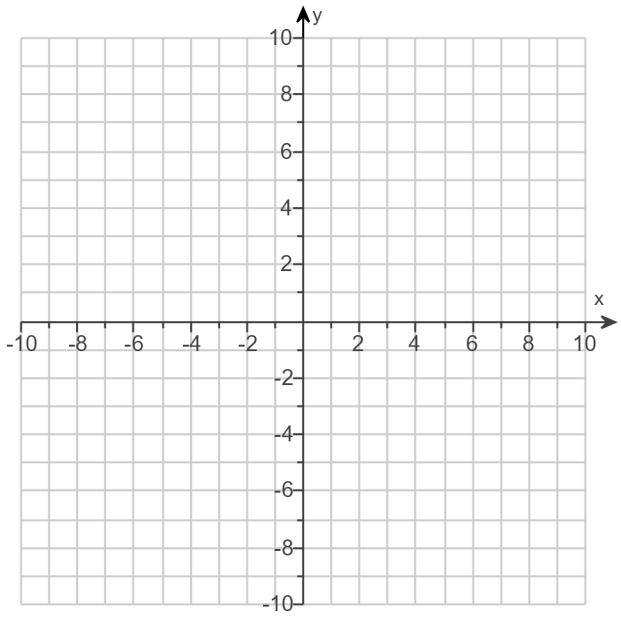
The solution set is [ ]. (Type your answer in interval notation.)

Answer: $(-\infty, -4]$

69.

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

$y = -2x + 4$



Find three ordered pair solutions of the given equation.

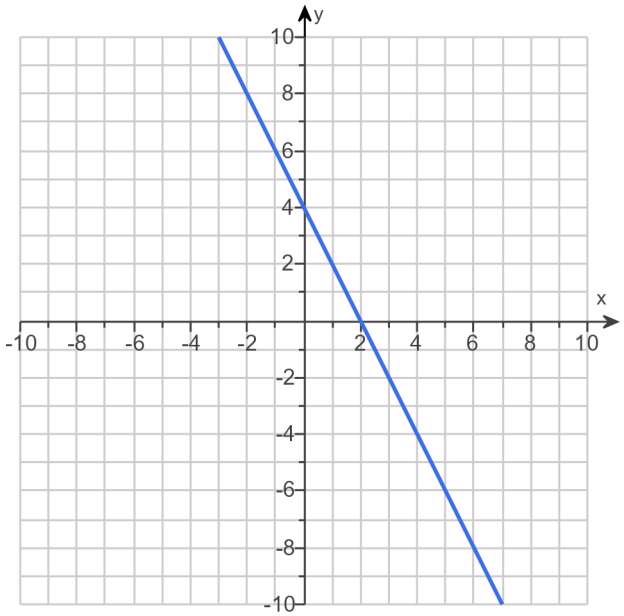
x	y
0	
1	
2	

Use the graphing tool to graph the line.

Answers 4

2

0

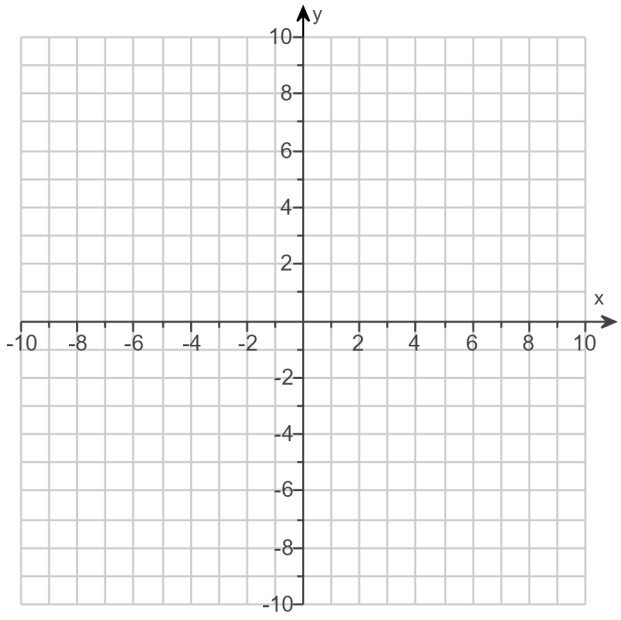


70.

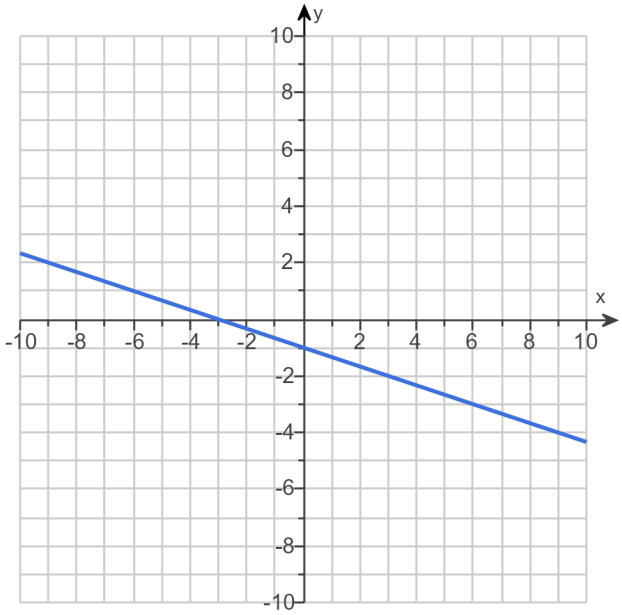
Graph the linear equation.

$x + 3y = -3$

Use the graphing tool to graph the equation.



Answer:

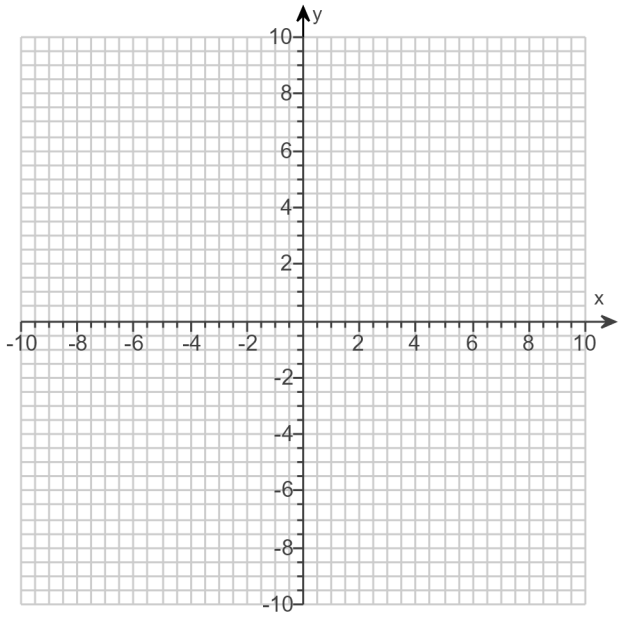


71.

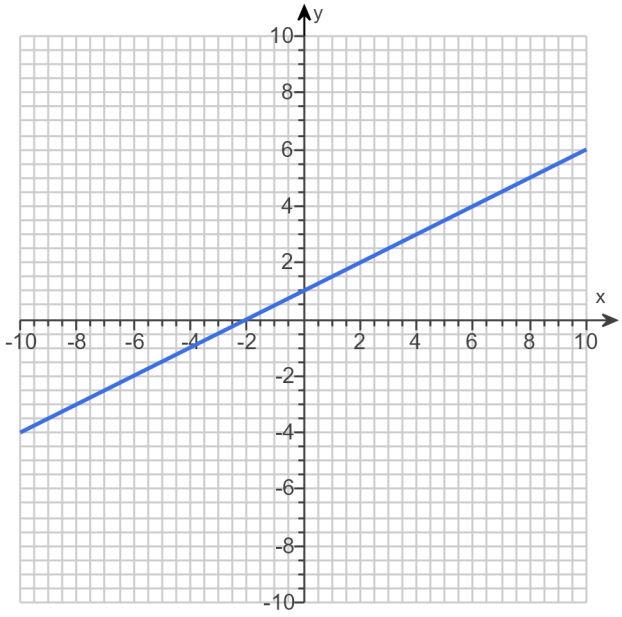
Graph the linear equation.

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

Use the graphing tool to graph the linear equation.



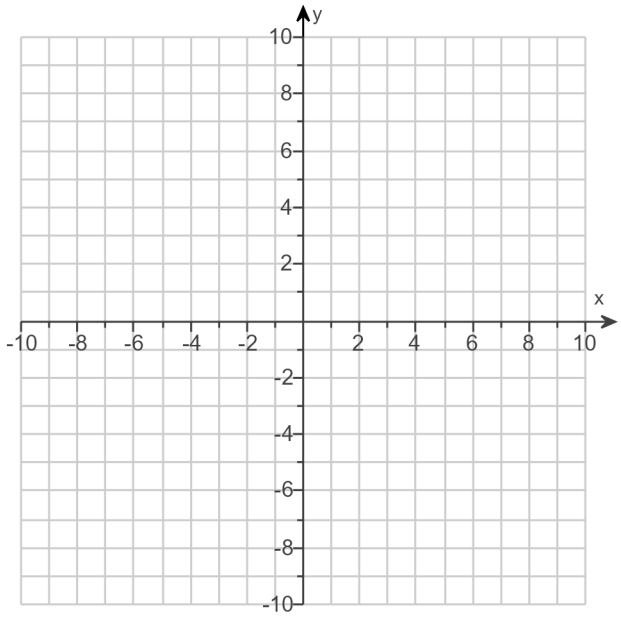
Answer:



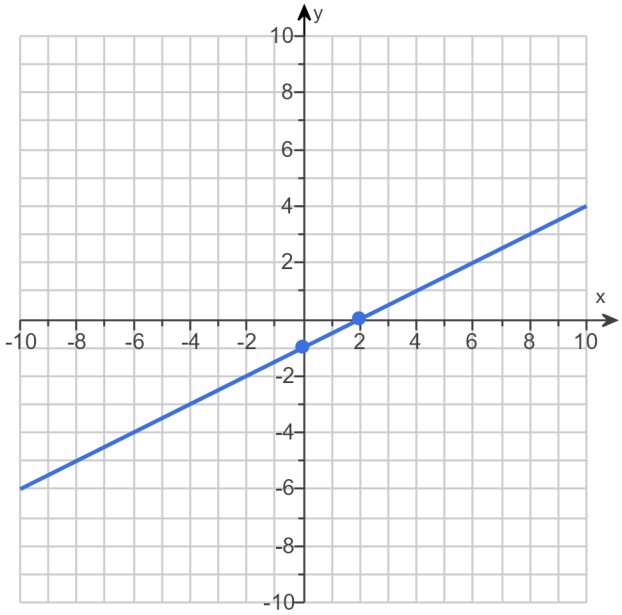
72. Plot the intercepts to graph the equation.

$2x - 4y = 4$

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.



Answer:



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

$(-3, 8)$ and $(-8, -4)$

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.

Answer: A. The slope is $\frac{12}{5}$. (Simplify your answer.)

74. Find the slope of the line.

$y = 2x + 4$

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.

Answer: A. The slope is **2**.

---

75. Find the slope of the line.

$3x + y = 7$

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.

Answer: A. The slope is **−3**.(Simplify your answer. Type an integer or a fraction.)

---

76. Find the slope of the line.

$2x - 5y = 10$

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.

Answer: A. The slope of the line is $\frac{2}{5}$. (Simplify your answer.)

---

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

$y = \frac{8}{7}x + 4$

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

Choose the correct answer below.

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

Answer: A. Neither

---

78. Find the slope-intercept form of the line whose slope is 3 and that passes through the point $(-3,5)$.

The equation of the line is ☐.
(Type your answer in slope-intercept form.)

Answer: $y = 3x + 14$

---

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

Slope -4 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.)

Answer: $y = -4x + 8$

---

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

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

a. $(3,4)$
b. $(4,6)$

a. Is $(3,4)$ a solution?

- ○ Yes
- ○ No

b. Is $(4,6)$ a solution?

- ○ No
- ○ Yes

Answers Yes

No

---

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

$$\begin{cases} 6x + y = 14 \\ 5x - y = 8 \end{cases}$$

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; $\{(x,y) \mid 6x + y = 14\}$ or $\{(x,y) \mid 5x - y = 8\}$.
- ○ **C.** There is no solution; $\{\}$ or $\varnothing$.

Answer: A. The solution is **(2,2)**. (Simplify your answer. Type an ordered pair.)

---

82. If $P(x) = x^2 + x + 5$, find $P(8)$.

$P(8) =$ [ ]

Answer: 77

---

83. Subtract.

$(3y^2 + 2y - 4) - (-9y + 5)$

$(3y^2 + 2y - 4) - (-9y + 5) =$ [ ] (Simplify your answer.)

Answer: $3y^2 + 11y - 9$

---

84. Add.

$(-8y^2 - 4y) + (4y^2 + 2y - 4)$

$(-8y^2 - 4y) + (4y^2 + 2y - 4) =$ [ ] (Do not factor.)

Answer: $-4y^2 - 2y - 4$

---

85. Multiply.

$(x + 6)(x + 4)$

$(x + 6)(x + 4) =$ [ ] (Simplify your answer.)

Answer: $x^2 + 10x + 24$

---

86. Multiply.

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

$(a + 6)(a - 5) =$ [ ]

Answer: $a^2 + a - 30$

---

87. Find the following product.

$(9y + 2)^2$

$(9y + 2)^2 =$ ☐

Answer: $81y^2 + 36y + 4$

---

88. Multiply.

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

$(4x - 5)(5x + 7) =$ ☐ (Simplify your answer.)

Answer: $20x^2 + 3x - 35$

---

89. Multiply.

$(x + 6)\left(x^3 - 3x + 4\right)$

$(x + 6)\left(x^3 - 3x + 4\right) =$ ☐

Answer: $x^4 + 6x^3 - 3x^2 - 14x + 24$

---

90. Find the following product.

$(3a + 3)\left(3a^2 + 7a + 6\right)$

$(3a + 3)\left(3a^2 + 7a + 6\right) =$ ☐

Answer: $9a^3 + 30a^2 + 39a + 18$

---

91. Multiply.

$(5x + y)(5x - y)$

$(5x + y)(5x - y) =$ ☐ (Simplify your answer.)

Answer: $25x^2 - y^2$

---

92. Find the product.

$(5x - 2)(9x + 4)$

$(5x - 2)(9x + 4) =$ ☐

Answer: $45x^2 + 2x - 8$

---

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

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

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

(Simplify your answer. Use positive exponents only.)

Answer: $\dfrac{1}{x^{18}y^{21}}$

---

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

$$\frac{\left(-4xy^{-3}\right)^{-5}}{\left(xy^{-1}\right)^{-1}}$$

$\frac{\left(-4xy^{-3}\right)^{-5}}{\left(xy^{-1}\right)^{-1}} =$ ☐

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

Answer: $-\dfrac{y^{14}}{1024x^4}$

---

95. Divide using synthetic division.

$\left(7x^2 + 13x + 9\right) \div (x + 1)$

$\left(7x^2 + 13x + 9\right) \div (x + 1) =$ ☐

Answer: $7x + 6 + \dfrac{3}{x + 1}$

---

96. Factor the trinomial completely.

$x^2 + 10x + 16$

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

- **A.** $x^2 + 10x + 16 =$ _____
- **B.** The polynomial is prime.

Answer: A. $x^2 + 10x + 16 =$ **(x + 8)(x + 2)**

---

97. Factor the trinomial completely.

$x^2 - 4x - 32$

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

- **A.** $x^2 - 4x - 32 =$ _____ (Type your answer in factored form.)
- **B.** The polynomial is prime.

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

---

98. Factor the following binomial completely.

$49x^2 - 144y^2$

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

- **A.** $49x^2 - 144y^2 =$ _____ (Factor completely.)
- **B.** The polynomial is prime.

Answer: A. $49x^2 - 144y^2 =$ **(7x + 12y)(7x − 12y)** (Factor completely.)

---

99. Solve the equation.

$(x - 9)(x - 7) = 0$

$x =$ _____

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

Answer: 9,7

---

100. Solve the equation.

$(5x + 6)(7x - 8) = 0$

x = [ ]

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

Answer: $-\frac{6}{5}, \frac{8}{7}$

---

101. Solve the equation.

$x^2 - 11x + 18 = 0$

x = [ ]

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

Answer: 9,2