Mrs. Savage

Foundations of Algebra

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Name: _____ Date: _____

1. Jose had 18 cookies in a bag. He ate some on his way home and has 12 cookies left. Which of the following shows how many cookies he ate?

A. $18 - \square$ B. $30 - \square$

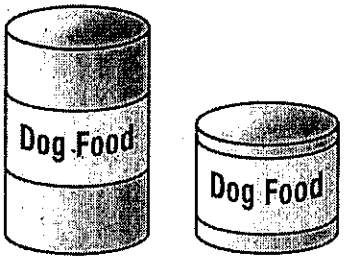
C. $12 - \square$ D. $6 - \square$

2. Amber had 13 pencils. She gave some of them away. Now she has 6 left. Which equation could show how many pencils Amber gave away?

A. $13 - \square = 6$ B. $13 - \square = 7$

C. $13 + \square = 6$ D. $13 + \square = 7$

3. A large can of dog food costs $0.75 more than a small can of dog food.



If $\square$ represents the price of one large can of dog food, which expression shows the price of one small can of dog food?

A. $\square - \$0.75$ B. $\$0.75 - \square$

C. $\square + \$0.75$ D. $\$0.75 \times \square$

4. There are 22 students in a class. There are $\square$ students absent today.

Which of the following represents the number of students who are in class today?

A. $22 + \square$ B. $22 - \square$

C. $22 \times \square$ D. $22 \div \square$

5. The cost of an adult ticket to a concert is $3 more than the cost of a student ticket to the same concert. If the cost of an adult ticket is $\square$ dollars, which expression represents the cost of a student ticket, in dollars?

A. $\square + 3$ B. $\square - 3$ C. $3 - \square$ D. $3 \times \square$

6. Tom has $\triangle$ marbles. Bob has 10 marbles. Tom has 3 more marbles than Bob. Which number sentence is correct?

A. $\triangle + 10 = 3$ B. $10 - \triangle = 3$

C. $3 + \triangle = 10$ D. $\triangle - 3 = 10$

7. Patrick and Susan both collect stamps. Susan has 5 times as many stamps as Patrick. If  is used to represent the number of stamps that Patrick has, which expression shows the total number of stamps that Patrick and Susan have together?

A. $\left(5 + \square\right) \times \square$ B. $\left(5 - \square\right) + \square$

C. $\left(5 + \square\right) + \square$ D. $\left(5 \times \square\right) + \square$

8. Patrick and Susan both collect stamps. Susan has 5 times as many stamps as Patrick. If  is used to represent the number of stamps that Patrick has, which expression describes the total number of stamps that Patrick and Susan have together?

A. $(5 + \square) \times \square$

B. $(5 - \square) + \square$

C. $(5 + \square) + \square$

D. $(5 \times \square) + \square$

9. The value of $\square$ is greater than 1. The value of $\triangle$ is greater than 0 and less than 1. Which expression has the *greatest* value?

A. $\triangle - \square$ B. $\triangle \div \square$

C. $\square \times \triangle$ D. $\square \div \triangle$

10. If $\Delta = 3$, what is the value of the expression below?

$(6 + \Delta) \div 2$

A. 3 B. 4.5 C. 7.5 D. 9

11. Which word problem matches this equation?

$3 \times \Delta + 2 = 11$

A. Mariah ate two slices of pizza and drank three cups of water. If she spent \$11, how much did one slice of pizza cost?

B. Shannon chopped three onions in order to make 11 servings of onion rings. How much onion was used for one serving?

C. Beth swam for three hours on Saturday and two hours on Sunday. If she swims two hours each day, how many more days will it take her to swim a total of 11 hours?

D. Hilary washed pickup trucks for \$3 each and cars for \$2 each. If she earned \$11 in one morning, and washed only one car, how many pickup trucks did she wash?

12. What is the value of the expression below when $\Delta = 8$?.

$\frac{\Delta}{2} = 2$

A. 2 B. 3 C. 4 D. 6

13. Peter is five years older than his best friend Gene. If Peter's age is represented by ♠, then which expression represents Gene's age?

A. $5\spadesuit$ B. $\spadesuit + 5$ C. $\frac{1}{5}\spadesuit$ D. $\spadesuit - 5$

14. Ernie is four years younger than his best friend Pepe. If Ernie's age is represented by $\diamond$, then which expression represents Pepe's age?

A. $\diamond + 4$ B. $\diamond - 4$ C. $\frac{1}{4}\diamond$ D. $4\diamond$

15. Which problem can be solved using the number sentence shown below?

$6 \times 2 = \square$

A. There are 6 children in a swimming pool. Two more children are getting in. How many children are in the pool?

B. There are 6 children eating lunch. Each child ate 2 slices of cheese. How many slices of cheese were eaten?

C. There are 6 children playing basketball. Two left to get a drink of water. How many children are left playing basketball?

D. There are 6 children walking to the library. They are walking in groups of 2. How many groups of 2 are there?

16. This math sentence represents the total number of cow legs in the cow pen. If you know that $\square$ represents the number of cows and there are 12 cows in the pen, what does the $\triangle$ represent?

$\square \times \triangle = 48$

A. The amount of grain the cows eat.

B. How much milk each cow gives.

C. The number of legs on each cow.

D. The total number of legs in the pen.

17. If $\square\square\bigcirc = 2x + 1$, then what would $\square\bigcirc\bigcirc$ equal?

A. $x + 2$ B. $2x + 2$ C. $3x$ D. 3

18. If $\blacktriangle + \blacktriangle + \blacktriangle = 3x$ and $\bullet + \bullet = 2$, then what would $\blacktriangle + \bullet$ equal?

A. $x + 1$ B. $x + 2$ C. $2x$ D. 2

19. Let the symbol $\square$ mean "divide by two, then multiply by the next larger integer, then add the next smaller integer." For example:

$$\boxed{4} = (4 \div 2) \times 5 + 3 = 13$$

Find: $\boxed{\boxed{5} + \boxed{6}}$

A. 1,033 B. 1,079 C. 1,126 D. 1,174

20. Let the symbol $\triangle$ mean "divide an integer in half, then multiply by the next smaller integer, then add the next larger integer." For example:

$$\triangle 8 = \left(\frac{8}{2}\right) \times 7 + 9 = 37$$

Find: $\triangle 4 + \triangle 12$

A. 3,089 B. 3,540 C. 4,005 D. 4,096

21. Let the symbol $\triangle$ mean "divide an integer in half, then multiply by the next smaller integer, then add the next larger integer." For example:

$$\triangle 8 = \left(\frac{8}{2}\right) \times 7 + 9 = 37$$

Find: $\triangle 6 + \triangle 10$

A. 3,003 B. 3,082 C. 3,584 D. 4,060

22. If = 1, what fraction is represented by

A. $\frac{3}{2}$ B. $\frac{3}{4}$ C. $\frac{8}{5}$ D. $1\frac{3}{4}$

23. If = 1, what fraction is represented by

A. $\frac{1}{2}$ B. $\frac{2}{3}$ C. $\frac{3}{4}$ D. $\frac{4}{3}$

24. Let the symbol $\square$ mean "multiply by two, then add the next larger integer, then multiply the sum by two." For example:

$$\boxed{3} = ((3 \times 2) + 4) \times 2 = 20$$

Find: $\boxed{\boxed{4} + \boxed{5}}$

A. 190 B. 234 C. 240 D. 350

Name: _____ Date: _____

1. The solution of the equation $3(x + 3) = 12$ is

   A. 1 B. 2 C. 3 D. 4

2. What is the value of p in the equation $2(3p - 4) = 10$?

   A. 1 B. $2\frac{1}{3}$ C. 3 D. $\frac{1}{3}$

3. State the operation used to solve the following equation.

   $x - 7 = 15$

   A. Subtract 7 from both sides.

   B. Add 7 to both sides.

   C. Divide each side by 7.

   D. Multiply each side by 7.

4. Toni needs to solve the equation shown below.

   $\frac{3}{4}t = \frac{6}{20}$

   What operation should Toni perform to solve the equation for t?

   A. multiply both sides by $\frac{3}{4}$

   B. divide both sides by $\frac{3}{4}$

   C. add $\frac{3}{4}$ to both sides

   D. subtract $\frac{3}{4}$ from both sides

5. Leah wants to determine how many pounds are in 2,864 ounces. She creates the equation $16x = 2,864$ to find the answer.

   Which operation could she use to solve for the variable x?

   A. Adding 16 B. Subtracting 16

   C. Dividing by 16 D. Multiplying by 16

6. Todd divided both sides of the equation below by 5.

   $5x = 2$

   Which other operation would have produced the same result?

   A. subtracting 2 from both sides

   B. subtracting 5 from both sides

   C. multiplying both sides by $\frac{1}{5}$

   D. multiplying both sides by $\frac{1}{2}$

7. Lara has \$12 in quarters. The equation below can be used to solve for q, the number of quarters Lara has.

   $0.25q = 12$

   Which of the following describes a way to solve for q in one step?

   A. add 0.25 to both sides

   B. subtract 0.25 from both sides

   C. multiply both sides by 0.25

   D. divide both sides by 0.25

8. How would the inverse operation of addition be used to solve this equation?

   $36 + m = 54$

   A. $54 - 36 = m$ B. $36 + 54 = m$

   C. $54 \div 36 = m$ D. $36 \times 54 = m$

9. Kayla enjoyed solving equations. She provided the teacher with the solution to the problem below, but did not explain her answer.

$$3r = 21$$
$$r = 7$$

Which statement could Kayla use to explain how she got her answer?

A. Divide both sides by three.

B. Add three to both sides of the equation.

C. Multiply both sides of the equation by 3.

D. Subtract 3 from both sides of the equation.

10. Which of the following statements describes how to use an inverse operation to solve the equation $c + 6 = 16$?

A. Multiply both sides of the equation by six because multiplication is the inverse operation of addition.

B. Subtract six from both sides of the equation because subtraction is the inverse operation of addition.

C. Add six to both sides of the equation because addition is the inverse operation of subtraction.

D. Divide both sides of the equation by six because division is the inverse operation of addition.

11. Rashid solved the equation below in one step to find the solution for x.

$$17 + x = 38$$

Which of the following solves the equation in one step?

A. Add 17 to the left side and add 17 to the right side.

B. Add 17 to the left side and subtract 17 from the right side.

C. Subtract 17 from the left side and add 17 to the right side.

D. Subtract 17 from the left side and subtract 17 from the right side.

12. Beverly was asked to solve the equation below for homework.

$$2n = 16$$

If she found that $n = 8$, which operation did she use to isolate the variable n?

A. Add 2 to both sides of the equation

B. Divide both sides of the equation by 2

C. Multiply both sides of the equation by 2

D. Subtract 2 from both sides of the equation

13. Holly learned that the human heart beats about 4,200 times in an hour. The equation $60 \times b = 4,200$ can be used to find b, the number of beats in one minute.

Which of the following should Holly use if she wanted to apply an inverse operation to solve the equation?

A. Holly should multiply both sides of the equation by 60.

B. Holly should add 60 to both sides of the equation.

C. Holly should subtract 60 from both sides of the equation.

D. Holly should divide both sides of the equation by 60.

14. Javier spent a total of $45 for a pair of jeans and a shirt. The shirt was on sale for $15. He used the equation $15 + j = 45$ to find j, the cost of the jeans. His solution was $j = 60$.

How did Javier solve the equation?

A. Javier solved the equation correctly. He added 15 to both sides of the equation. Addition is the inverse operation of subtraction.

B. Javier solved the equation correctly. He multiplied both sides of the equation by 15. Multiplication is the inverse operation of division.

C. Javier did *not* solve the equation correctly. He added 15 to both sides of the equation. He should have subtracted 15 from both sides. Subtraction is the inverse operation of addition.

D. Javier did *not* solve the equation correctly. He multiplied both sides ofthe equation by 15. He should have divided both sides by 15. Multiplication is the inverse operation of addition.

15. Max must solve the following equation to find b, the number of boys in his class.

$$b + 12 = 23$$

Which method should Max use to find b?

A. Subtract 12 from both sides of the equation.

B. Subtract 23 from both sides of the equation.

C. Add 12 to both sides of the equation.

D. Add 23 to both sides of the equation.

16. Which operation should be used to solve $3x = 36$ for x?

A. add 3 to both sides

B. subtract 3 from both sides

C. divide both sides by 3

D. multiply both sides by 3

17. Emmy is 12. She writes an equation to find her mother's age, m.

$$m - 12 = 35$$

Which operation solves the equation for m?

A. add 12 to both sides

B. subtract 12 from both sides

C. multiply both sides by 12

D. divide both sides by 12

18. Dave uses the equation $15m = 165$ to calculate the amount of money (m) he earned during each hour of work. Which step should Dave use to solve the equation for m?

A. add 15 to both sides

B. subtract 15 from both sides

C. multiply both sides by 15

D. divide both sides by 15

19. An equation is shown below.

$$3x = 36$$

Which operation can be used on *both* sides of the equation to solve for x?

A. add 3

B. subtract 3

C. divide by 3

D. multiply by 3

20. An equation is shown below.

$$15m = 165$$

What one step should be done to *both* sides of the equation to solve for m?

A. add 15

B. subtract 15

C. multiply by 15

D. divide by 15

21. State the operations used to solve the following equation.

$$2x + 8 = 9$$

A. Add 8 to both sides, multiply by 2 on both sides.

B. Subtract 8 from both sides, divide by 2 on both sides.

C. Divide by 2 on both sides, subtract 8 from both sides.

D. Subtract 10 from both sides, divide by 10 on both sides.

22. Which of the following represents a correct procedure for solving each given equation?

A.
$$\begin{aligned} -2(x-5) &= -12 \\ -2x - 10 &= -12 \\ -2x &= -2 \\ x &= 1 \end{aligned}$$

B.
$$\begin{aligned} 8(x-5) &= 24 \\ 8x - 40 &= 24 \\ 8x &= -16 \\ x &= -2 \end{aligned}$$

C.
$$\begin{aligned} 5 - 2x &= 8x + 25 \\ 5 &= -10x + 25 \\ 30 &= 10x \\ 3 &= x \end{aligned}$$

D.
$$\begin{aligned} 7x - 12 &= -2x + 15 \\ 9x - 12 &= 15 \\ 9x &= 27 \\ x &= 3 \end{aligned}$$

23. Which of the following is a correct procedure for solving the equation below?

$$2(x-6)-12=-3(x+5)$$

A. $2(x-6)-12=-3(x+5)$
$2x-6-12=-3x+5$
$2x-18=-3x+5$
$5x-18=5$
$5x=23$
$x=\frac{23}{5}$

B. $2(x-6)-12=-3(x+5)$
$2x-12-12=-3x+15$
$2x=-3x+15$
$5x=15$
$x=3$

C. $2(x-6)-12=-3(x+5)$
$2x-12-12=-3x-15$
$2x-24=-3x-15$
$5x-24=-15$
$5x=-39$
$x=\frac{39}{5}$

D. $2(x-6)-12=-3(x+5)$
$2x-12-12=-3x-15$
$2x-24=-3x-15$
$5x-24=-15$
$5x=9$
$x=\frac{9}{5}$

24. Colleen solved the equation $2(2x+5)=8$ using the following steps.

Given: $2(2x+5)=8$
Step 1: $4x+10=8$
Step 2: $4x=-2$
Step 3: $x=-\frac{1}{2}$

To get from Step 2 to Step 3, Colleen—

A. divided both sides by 4.

B. subtracted 4 from both sides.

C. added 4 to both sides.

D. multiplied both sides by 4.

25. Solve: $3(x+5)=2x+35$

Step 1: $3x+15=2x+35$
Step 2: $5x+15=35$
Step 3: $5x=20$
Step 4: $x=4$

Which is the first *incorrect* step in the solution shown above?

A. Step 1 B. Step 2 C. Step 3 D. Step 4

26. Which steps can be used to solve for the value of y?

$$\frac{2}{3}(y+57)=178$$

A. Divide both sides by $\frac{2}{3}$, then subtract 57 from both sides

B. Subtract 57 from both sides, then divide both sides by $\frac{2}{3}$

C. Multiply both sides by $\frac{2}{3}$, then subtract 57 from both sides

D. Subtract $\frac{2}{3}$ from both sides, then subtract 57 from both sides

27. Which of the following statements describes a correct method for solving the equation below?

$$20+2w=50$$

A. Add 20 to both sides of the equation, and then divide both sides by 2.

B. Subtract 20 from both sides of the equation, and then divide both sides by 2.

C. Divide both sides of the equation by 2, and then add 20 to both sides.

D. Divide both sides of the equation by 2, and then subtract 20 from both sides.

28. Which of the following describes one way to solve this equation?

$$12 - 3x = 5$$

A. Add $3x$ to both sides, then divide both sides by 3.

B. Subtract $3x$ from both sides, then multiply both sides by 3.

C. Add 12 to both sides, then multiply both sides by -3.

D. Subtract 12 from both sides, then divide both sides by -3.

29. Which steps could be used to solve this equation?

$$\frac{2}{3}x + 9 = 15$$

A. Subtract 9 from both sides; then multiply both sides by the reciprocal of $\frac{2}{3}$.

B. Subtract 9 from both sides, then divide both sides by the reciprocal of $\frac{2}{3}$.

C. Multiply both sides by the reciprocal of $\frac{2}{3}$, then subtract 9 from both sides.

D. Divide both sides by the reciprocal of $\frac{2}{3}$, then subtract 9 from both sides.

30. Which of the following could be the next step in solving the equation $3(x + 2) = 3 - (x + 1)$?

A. $3x + 6 = 3 - x - 1$ B. $3x + 2 = 3 - x - 1$

C. $3x + 6 = 3 - x + 1$ D. $3x + 5 = 3 - x + 1$

31. Which of the following sets of steps could be used to completely solve the equation below?

$$3x + 9 = 15$$

A. add 9 to each side, and then multiply each side by 3

B. subtract 9 from each side, and then divide each side by 3

C. multiply each side by 3, and then add 9 to each side

D. divide each side by 3, and then subtract 9 from each side

32. Brian and Ted used the equation $17 = d + 12$ to find d, the money Ted needed so that he had the same amount of money as Brian.

Which equation explains the process Brian and Ted could have used to find d?

A. $17 - 17 = d + 12 - 17$ B. $17 + 17 = d + 12 + 17$

C. $17 - 12 = d + 12 - 12$ D. $17 + 12 = d + 12 + 12$

33. Jamaal earned money cutting lawns after school. On Monday he earned \$35, and on Tuesday he earned \$25. By the end of the week, he had earned a total of \$250. Jamaal wrote the equation $250 - 35 - 25 = x$ to represent the amount of money he earned after Tuesday.

Which statement justifies how Jamaal wrote his equation?

A. Jamaal used inverse operations on $250 + 35 + 25 = x$.

B. Jamaal used inverse operations on $250 - 35 - 25 = x$.

C. Jamaal used inverse operations on $x + 35 + 25 = 250$.

D. Jamaal used inverse operations on $x - 35 - 25 = 250$.

34. Which of the equations below represents the first step of the solution process?

$$5(6x + 4) + 1 = -39$$

Step 1: ☐

Step 2: $30x + 21 = -39$

Step 3: $30x = -60$

Step 4: $x = -2$

A. $5(6x + 1) + 4 = -39$ B. $5(6x + 1) = -39$

C. $30x + 4 + 1 = -39$ D. $30x + 20 + 1 = -39$

41. Solve each of the unknowns in the equations below:

$x - 76 = 102$

A. 26 B. 34 C. 36 D. 178

42. Solve each of the unknowns in the equations below:

$750 + y = 805$

A. 45 B. 50 C. 55 D. 1555

43. Which value for R makes the number sentence below true?

$R \div 14 = 32$

A. 8 B. 13 C. 56 D. 448

44. Which value for N makes the sentence below true?

$72 \times N = 1,728$

A. $N = 24$ B. $N = 29$

C. $N = 1,659$ D. $N = 1,800$

45. Which of the following is the value of P for the problem below?

$P \times 72 = 2232$

A. 2304 B. 2160 C. 72 D. 31

46. If $x - 3 = 6$, what is the value of x?

A. 2 B. 3 C. 6 D. 9

47. What value of k makes the following equation true?

$k \div 3 = 36$

A. 108 B. 98 C. 39 D. 12

48. What is x if $3x = 84$?

A. 20 B. 21 C. 26 D. 28

49. What value of r makes $\frac{r}{-11} = -3$ true?

A. -33 B. -8 C. 8 D. 33

50. What value of x makes this equation true?

$2x = 36$

51. What is the value of x in this equation?

$3x = 24$

52. Solve each of the unknowns in the equations below:

$\frac{8}{r} = 96$

A. $\frac{1}{12}$ B. 12 C. 88 D. 104

53. Solve this equation, show your work, and choose the best answer: $5x + 8 = 18$

A. $x = 2$ B. $x = 5\frac{1}{5}$ C. $x = 5$ D. $x = \frac{1}{2}$

54. Choose the correct solution for the equation: $5x + 8 = 43$

A. $x = 10$ B. $x = 7$ C. $x = 175$ D. $x = 5$

55. Choose the correct solution for the equation: $x/2 - 12 = 24$

A. $x = 18$ B. $x = 24$ C. $x = 6$ D. $x = 72$

56. For what value of x will $3x + 4 = x - 6$ be a true statement?

A. $x = -5$ B. $x = -\frac{5}{2}$ C. $x = -1$ D. $x = -\frac{1}{2}$

57. Which value for x makes the number sentence true?

$3x + 10 = 19$

A. 3 B. 6 C. 9 D. 27

58. Solve for x.

$3x + 7 = 2x$.

A. $x = \frac{5}{7}$ B. $x = -\frac{5}{7}$ C. $x = -7$ D. $x = 7$

59. What is the solution to the equation?

$\frac{7}{2}x - 2 = 28 - 4x$

A. $x = 0$ B. $x = \frac{2}{7}$ C. $x = 4$ D. $x = 7$

60. What is the solution to the equation?

$\frac{3}{4}x - 4 = 40 - 2x$

A. $x = -121$ B. $x = -16$

C. $x = 16$ D. $x = 121$

61. Determine the value of x that makes the equation below true.

$5x + 2 = 42$

Which of the following equations is true for the same value of x?

A. $4x + 2 = 30$ B. $3x - 3 = 5$

C. $3x + 4 = 20$ D. $2x - 4 = 12$

62. Which of the following is the solution to the equation below?

$2x + 3 = 13$

A. $x = 5$ B. $x = 8$ C. $x = 20$ D. $x = 32$

63. What is the solution to the equation below?

$6x + 4 = 2x - 12$

A. $x = -4$ B. $x = 4$ C. $x = 2$ D. $x = -2$

64. What is the solution to the equation below?

$3(x - 4) = 5x - 6$

A. $x = -3$ B. $x = \frac{3}{4}$ C. $x = 1$ D. $x = 9$

65. What is the solution to the equation below?

$\frac{x}{4} = \frac{x+1}{3}$

A. $x = -4$ B. $x = -1$ C. $x = \frac{1}{7}$ D. $x = \frac{4}{7}$

66. Look at the equation below. If $x = 2$, what is the value of y?

$y = 6x - 3$

A. 6 B. 9 C. 12 D. 15

67. What value for z makes this equation true?

$8 \times 7 = (8 \times 30) - (8 \times z)$

A. 23 B. 8 C. 30 D. 37

68. What value of x makes the equation below true?

$\frac{x}{9} + 6 = 8$

A. 2 B. 18 C. 66 D. 126

69. What value of x satisfies the equation $4x + 2 = 22$?

A. 3.5 B. 5.0 C. 6.0 D. 7.5

70. What is the value of x if $-3x + 2 = -7$?

A. $x = -6$ B. $x = -3$ C. $x = 3$ D. $x = 6$

71. Solve the following equation:

$4x - 3 = 12 + x$

A. $x = 45$ B. $x = 15$ C. $x = 5$ D. $x = 3$

72. If $n + n + n = 60$, what is the value of n?

A. 6 B. 10 C. 15 D. 20

73. What number does n stand for in the sentence below?

$(8 + 2) + 6 = 8 + (n + 6)$

A. 2 B. 6 C. 8 D. 16

74. If $5x - 8 = 7$, what is the value of $5x + 8$?

A. -7 B. 0 C. 15 D. 23

75. Which value makes the equation $5b + 15 = 30$ true?

A. $b = 3$ B. $b = 9$ C. $b = 10$ D. $b = 75$

76. What is the value of p when $2p + 10 = 24$?

A. $p = 7$ B. $p = 12$ C. $p = 17$ D. $p = 28$

77. $2x - 1 = 7$

What does x equal?

A. 3 B. 4 C. 5

78. What value of x makes the equation true?

$$3x + 2 = 14$$

A. 3 B. 4 C. 13 D. 15

79. What is the value of x when $2x + 4 = 14$?

A. 5 B. 9 C. 36

80. Solve: $\frac{x}{3} + 5 = 2$

A. $x = -9$ B. $x = -1$ C. $x = 1$ D. $x = 9$

81. If $s = \frac{w - 56}{-7}$ and $s = 6$, what is the value of w?

A. -57 B. -9 C. 7 D. 14

82. If $4x - 6 = 14$, what is the value of x?

A. 1 B. 2 C. 4 D. 5

83. Solve for x.

$$6x + 5 = -x + 40$$

A. $x = -9$ B. $x = -5$ C. $x = 5$ D. $x = 9$

84. Look at the equation below.

$$4x - 2 = 18$$

What value of x makes this equation true?

A. 4 B. 5 C. 9 D. 16

85. Look at the equation below.

$$5x - 3 = 12$$

What value of x makes this equation true?

A. $\frac{9}{5}$ B. 3 C. 5 D. 6

86. What is the value of x in the following equation?

$$4x + 10 = 70$$

A. 5 B. 10 C. 15 D. 20

87. If $2x + 4 = 14$, then $x =$

A. 5 B. 7 C. 9 D. 18

88. Solve: $12p + 3 = 11$

A. $\frac{2}{3}$ B. $1\frac{2}{9}$ C. $1\frac{1}{2}$ D. 2

89. Solve: $3x + 5 = -7$

A. -6 B. -4 C. $-\frac{7}{8}$ D. $\frac{2}{3}$

90. Solve: $2x + 8 = -16$

A. -12 B. -4 C. 4 D. 12

91. Solve: $4x - 2 = 14$

A. 2 B. 4 C. 6 D. 8

92. Solve: $3x - 5 = 13$

A. 2 B. 4 C. 6 D. 8

93. Find the value of x: $4x - (-8) = -32$

A. $x = -10$ B. $x = 6$ C. $x = 8$ D. $x = 10$

94. If $\frac{2}{5}n + 4 = 20$, what is the value of n?

A. $\frac{5}{32}$ B. $6\frac{2}{5}$ C. 36 D. 40

95. Solve: $11p - 8p - 7 = 35$

A. 2 B. 3 C. 9 D. 14

96. Given: $3x + 11 = y$, solve for x if $y = 29$

A. $3\frac{2}{3}$ B. 6 C. $9\frac{1}{3}$ D. 14