Algebra 2 1.3-1.6 Worksheet

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Determine which value is a solution of the equation.
   \[ 18 + t = 32 \]
   a. 15
   b. 14
   c. 18
   d. 28

2. Use an equation to model the sentence.
   How many raisins are left in a jar of 49 raisins after you have eaten some?
   a. \( R = 49 - N \)
   b. \( R = \frac{49}{N} \)
   c. \( R = \frac{N}{49} \)
   d. \( R = 49 + N \)

3. Solve for \( p \): \(-6p - q = p + 5q\)
   a. \( p = -\frac{7}{6}q \)
   b. \( p = -\frac{6}{7}q \)
   c. \( p = \frac{p + 6q}{6} \)
   d. \( p = \frac{p + 5q}{5} \)

4. A grocery store sells 2 boxes of cereal for $4.95. Which method can be used to find the total cost \( c \) of purchasing \( n \) boxes of cereal?
   a. Multiply \( n \) by the cost of one box.
   b. Divide \( n \) by \( c \).
   c. Multiply \( n \) by \( c \).
   d. Divide \( n \) by the cost of one box.

Solve.

5. \( 9x - 5 \leq 7x - 11 \)
   a. \( x = 16 \)
   b. \( x \leq -3 \)
   c. \( x \leq 3 \)
   d. \( x \geq 16 \)

Short Answer

Solve the equation. Check your solution.

1. \( 8p + 4 = -20 \)
2. \[ \frac{p}{14} + 9 = 13 \]

3. \[ \frac{r}{10} + 3 = 12 \]

4. Solve the equation. \(-3x + 5 = 7x + 8\)

5. Solve the equation. \(5(3 - 4x) = 7 - (4 - x)\)

   **Solve the equation.**

6. \(3 - 4z = -5 + 8z\)

7. \(7z + 5 = 9z - 3\)

8. \(6k + 5 = k + 6\)

9. \(5x + 14 - 2x = 9 - (4x + 2)\)

10. \(7x - 29 - 21x = 3 - (12 + 2x)\)

11. \(5n - 2(n - 2) = -11\)

12. \(5n - 2(2 - n) = -7\)

   **Solve the equation. Round your result to two decimal places.**

13. \(18.3y - 7.6 = 8.4y - 14.6\)

14. \(27.4y - 11.2 = 7.3y - 12.6\)

15. Hannah pays $39 per month for her cellular phone, which includes 1 hour of use. After the first hour, she pays 20¢ per minute. How much will her monthly bill be if she uses her phone 2.5 hours?

16. Tina can type at least 50 words per minute. Write and graph an inequality to describe this statement.

17. Jack can run a mile in less than 7 minutes. Write and graph an inequality to describe this statement.
Solve.

18. \(-3f + 8 < 11\)

19. Is \(x = \frac{5}{2}\) a solution of the inequality \(5x - 4 \leq 3(x - 7)\)?

Solve the inequality. Then graph the solution.

20. \(5x - 6 < -16\) or \(-13x < 26\)