

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Module 3** Solving Linear Equations  
of One Variable  
**Lesson 5** Solving Multi-Step Linear Equations



**independent  
practice**

**Solve and check.**

- |  |   |
|--|---|
| 1. $6x + 3x - x = 96$ _____  | 2. $11P + 3P - 15P = 743$ _____                           |
| 3. $7r + 11r = 725 - 7r$ _____                                     | 4. $a - 9a + 75 = 135 + 2a$ _____                         |
| 5. $2(7h - 3) = 120$ _____   | 6. $3(5w + 15) = 210$ _____                               |
| 7. $-9(3y - 4) = -531$ _____                                       | 8. $-(5 - t) = 0[37t - 12t + 5(14 + 3t)]$ _____           |
| 9. $3 + d = 9 - d$ _____   | 10. $64 - 7K = -11K + 8$ _____                            |
| 11. $11 + 2G = 2G - (G - 15)$ _____                                | 12. $m + (m + 2) + (m + 4) = 72$ _____                    |
| 13. $n + (n + 1) + (n + 2) + (n + 3) = -122$<br>_____              | 14. $\frac{7x}{2} = 21$<br>_____                          |
| 15. $\frac{8w}{3} + 5 = 13$ _____                                  | 16. $0.47x = -3.23x + 62.9$ _____                         |
| 17. $\frac{v}{5} + \frac{2}{3} = \frac{6}{5} + \frac{v}{15}$ _____ | 18. $\frac{D}{2} - \frac{2D}{3} = \frac{7D}{6} + 1$ _____ |
| 19. $5.2y + 7.2 = 30.6 - 1.3y$<br>_____                            | 20. $c + 0.1c + 0.01c - 0.001c = c + 0.545$<br>_____      |

**Journal**

- Describe the steps you would use to solve the equation,  $3x + 4x - 2 = 5x - 6 + 2$ .
- Explain to a friend who missed this lesson how you determine if an equation has a solution of either "all real numbers" or "no solution".
- Do you still need to use the order of operations when solving multi-step linear equations? Could you solve  $3(7h + 4) - h = 7$  without using the order of operations?
- What method would you use to simplify the equation  $\frac{3}{4}(6a + 2) = \frac{1}{2}(3a - 1)$ ?
- Supply the reasons for each step to solve the equation,  $3(j + 2) = 4j + 7 - 5$ .

## Cumulative Review

**Simplify.**

1.  $2 - 3 \cdot 4 + 9$  \_\_\_\_\_

2.  $5 - 3(4 + 1) + 2(7)$  \_\_\_\_\_

3.  $14 + (3 + 4(7 - 3)) - 10(3 + 9)$  \_\_\_\_\_

**Combine like terms.**

4.  $2x - 3y + 5 - x + 7y$  \_\_\_\_\_

**Simplify.**

5.  $7x - 5x(3 - y) + (8(x + 2) - 3(y + 2))$  \_\_\_\_\_

**Solve the following problems.**

6. Name the property illustrated by this equation:  $A + B = B + A$

\_\_\_\_\_

7. Briefly describe the difference between “terms” and “factors”.

\_\_\_\_\_

\_\_\_\_\_

8. Evaluate:  $\frac{1}{2}bh$  where  $b = 7$  and  $h = 12$ . \_\_\_\_\_

9. Evaluate:  $\frac{-b + \sqrt{(b^2 - 4ac)}}{2a}$  where  $a = 4$ ,  $b = -12$  and  $c = 9$ . \_\_\_\_\_

10. Find the perimeter of a square, which has an area of 225 square inches.

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