NAME _____ DATE _____ PERIOD _____

3-4 Study Guide and Intervention *(continued)*

Solving Multi-Step Equations

Solve Multi-Step Equations To solve equations with more than one operation, often called **multi-step equations**, undo operations by working backward. Reverse the usual order of operations as you work.

Example **Solve $5x + 3 = 23$.**

$5x + 3 = 23$	Original equation.
$5x + 3 - 3 = 23 - 3$	Subtract 3 from each side.
$5x = 20$	Simplify.
$\frac{5x}{5} = \frac{20}{5}$	Divide each side by 5.
$x = 4$	Simplify.

Exercises

Solve each equation. Then check your solution.

1. $5x + 2 = 27$

2. $6x + 9 = 27$

3. $5x + 16 = 51$

4. $14n - 8 = 34$

5. $0.6x - 1.5 = 1.8$

6. $\frac{7}{8}p - 4 = 10$

7. $16 = \frac{d - 12}{14}$

8. $8 + \frac{3n}{12} = 13$

9. $\frac{g}{-5} + 3 = -13$

10. $\frac{4b + 8}{-2} = 10$

11. $0.2x - 8 = -2$

12. $3.2y - 1.8 = 3$

13. $-4 = \frac{7x - (-1)}{-8}$

14. $8 = -12 + \frac{k}{-4}$

15. $0 = 10y - 40$

Write an equation and solve each problem.

16. Find three consecutive integers whose sum is 96.

17. Find two consecutive odd integers whose sum is 176.

18. Find three consecutive integers whose sum is -93.