NAME _____ DATE _____ PERIOD ____

3-5 Skills Practice

Solving Equations with the Variable on Each Side

Ex $2(8x+2) = 3(2x-7)$

$16x + 4 = 6x - 21$

$-6x \quad -6x$

$10x + 4 = -21$

$-4 \quad -4$

$\frac{10x}{10} = \frac{-25}{10}$

$x = \frac{-25}{10}$

$\boxed{x = -\frac{5}{2}}$

CK $2\left[8\left(-\frac{5}{2}\right)+2\right] \stackrel{?}{=} 3\left[2\left(-\frac{5}{2}\right)-7\right]$

$2\left[\frac{-40}{2}+2\right] \stackrel{?}{=} 3\left[\frac{-10}{2}-7\right]$

$2[-20+2] \stackrel{?}{=} 3[-5-7]$

$2[-18] \stackrel{?}{=} 3[-12]$

$-36 \stackrel{?}{=} -36$ ✓

Solve each equation. Then check your solution.

3. $2m + 12 = 3m - 31$

4. $2h - 8 = h + 17$

5. $7a - 3 = 3 - 2a$

6. $4n - 12 = 12 - 4n$

7. $4x - 9 = 7x + 12$

8. $-6y - 3 = 3 - 6y$

9. $5 + 3r = 5r - 19$

10. $-9 + 8k = 7 + 4k$

11. $8q + 12 = 4(3 + 2q)$

12. $3(5j + 2) = 2(3j - 6)$

13. $6(-3v + 1) = 5(-2v - 2)$

14. $-7(2b - 4) = 5(-2b + 6)$