NAME _____ DATE _____ PERIOD ____

3-5 **Study Guide and Intervention** *(continued)*

Solving Equations with the Variable on Each Side

LOOK *ALL WORK ON LOOSE-LEAF!

Grouping Symbols When solving equations that contain grouping symbols, first use the Distributive Property to eliminate grouping symbols. Then solve.

Example Solve $4(2a - 1) = -10(a - 5)$.

use Arrows.

$8a - 4 = -10a + 50$

$+10a \quad +10a$

$18a - 4 = 50$

$+4 \quad +4$

$\frac{18a}{18} = \frac{54}{18}$

$a = \frac{6}{2} = 3$

CK $4[2(3)-1] \stackrel{?}{=} -10[(3)-5]$

$4[6-1] \stackrel{?}{=} -10[-2]$

$4[5] \stackrel{?}{=} 20$ ✓

Exercises Skip # 3, 8, and 20.

Solve each equation. Then check your solution.

1. $-3(x + 5) = 3(x - 1)$
2. $2(7 + 3t) = -t$
3. $3(a + 1) - 5 = 3a - 2$ Skip, ANSWER IS ALL REAL NUMBERS
4. $75 - 9g = 5(-4 + 2g)$
5. $5(f + 2) = 2(3 - f)$
6. $4(p + 3) = 36$
7. $18 = 3(2c + 2)$
8. $3(d - 8) = 3d$ Skip, NO SOLUTION
9. $5(p + 3) + 9 = 3(p - 2) + 6$
10. $4(b - 2) = 2(5 - b)$
11. $1.2(x - 2) = 2 - x$
12. $\frac{3 + y}{4} = \frac{-y}{8}$
13. $\frac{a - 8}{12} = \frac{2a + 5}{3}$
14. $2(4 + 2k) + 10 = k$
15. $2(w - 1) + 4 = 4(w + 1)$
16. $6(n - 1) = 2(2n + 4)$
17. $2[2 + 3(y - 1)] = 22$
18. $-4(r + 2) = 4(2 - 4r)$
19. $-3(x - 8) = 24$
20. $4(4 - 4k) = -10 - 16k$ Skip, NO SOLUTION
21. $6(2 - 2y) = 5(2y - 2)$