LESSON 2.6

NAME _____ DATE _____

Practice C

For use with pages 100–107

Use the distributive property to rewrite the expression without parentheses.

1. $(x + 8)10$
2. $9(y - 7)$
3. $(t - 4)(-2)$
4. $-6(r + 12)$
5. $-12(3 + n^2)$
6. $(x)(x - 5)$
7. $(-2a)(a + 7)$
8. $(2x + 11)(5x)$
9. $4\left(\frac{1}{3}x - \frac{3}{4}\right)$
10. $(-3x)(-x^2 + 2)$
11. $(-2 - 3y)(-7y^2)$
12. $4m^2(2m^2 - m^3)$

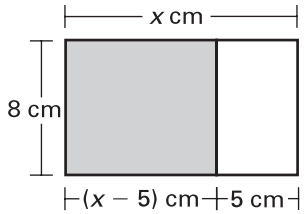
Simplify the expression by combining like terms.

13. $9m + (-16m)$
14. $-14x - 8x$
15. $6 - 3x + 2$
16. $-11 + t + t$
17. $4 + m - 3m$
18. $-9.2x + 7.8x$
19. $\frac{5}{6}x + \left(-\frac{3}{8}x\right)$
20. $163n - 187n$
21. $4x^2 - 8x^2 - 7$
22. $9a^2 - 5a^2 - 3a$
23. $4j + 8 - 6j - 3$
24. $-5x^3 + 2x^2 - 7x^3$

Apply the distributive property. Then simplify by combining like terms.

25. $(3x + 1)(-4) + x$
26. $2(3a - 5) - 2a$
27. $(-4m)(5m + 2) - 3m$
28. $2t^2 + (3 - 5t)(5t)$
29. $-2t(t - 5t^2) + (-5t^3)$
30. $5x - 2x(x - 3)$
31. $6 + 2(a + 8) + a$
32. $4 - 3(2y - 8) - 2y$
33. $-3y + y(y^2 + 1) - y^3$

34. ***Geometry*** Find the area of the shaded rectangle in two different ways. Show how the results are related to the distributive property.



35. ***Weight Lifting*** A weight lifter puts an x-pound weight on each side of a bar. A weight 10 pounds heavier than the first is then added to both sides. Finally, a weight 10 pounds heavier than the second weight is added to both sides. The expression $2[x + (x + 10) + (x + 2(10))]$ models the total weight lifted. Simplify the expression. What would the expression be if each added weight was 15 pounds heavier than the previous weight?

36. ***School Play Ticket Sales*** You are selling \$3 tickets for the school play. For Friday's performance, 100 tickets are sold. Let T be the number of tickets sold for Saturday's performance. Which equations correctly model the revenue R earned?

a. $R = 3(T + 100)$ **b.** $T = 3(R - 100)$

c. $R = 3T + 100$ **d.** $R = T + 300$

e. $R = 3T + 300$ **f.** $T = 3R - 300$

37. ***Interest Earned*** You put \$100 in a savings account that pays an annual interest rate of 4% for 2 years. Which equations correctly model the interest earned I if you keep the money in the account an additional t years?

a. $I = 100 \cdot 0.04(t - 2)$

b. $I = 100 \cdot 0.04(2 + t)$

c. $I = 100t + 200$

d. $I = 100 \cdot 0.04t - 100 \cdot 2$

e. $I = 100(t + 2)$

f. $I = 100 \cdot 0.04 \cdot 2 + 100 \cdot 0.04t$