

Practice: Section 2-3 WS (ODDS)**/21** Form G

Multiplying Binomials

Simplify each product using the Distributive Property.

1. $(x + 3)(x + 8)$

2. $(y - 4)(y + 7)$

3. $(m + 9)(m - 3)$

4. $(c - 6)(c - 4)$

5. $(2r - 5)(r + 3)$

6. $(3x + 1)(5x - 3)$

7. $(d + 2)(4d - 3)$

8. $(5t - 1)(3t - 2)$

9. $(a + 11)(11a + 1)$

Simplify each product using a table.

10. $(x + 3)(x - 5)$

11. $(a - 2)(a - 13)$

12. $(w - 4)(w + 8)$

13. $(5h - 3)(h + 7)$

14. $(x - 3)(2x + 3)$

15. $(2p + 1)(6p + 4)$

Simplify each product using the FOIL method.

16. $(2x - 6)(x + 3)$

17. $(n - 5)(3n - 4)$

18. $(4p^2 + 2)(3p - 1)$

19. $(a + 7)(a - 3)$

20. $(x + 3)(3x - 2)$

21. $(k - 9)(k + 5)$

22. $(b - 5)(b - 11)$

23. $(4m - 1)(m + 4)$

24. $(7z + 3)(4z - 6)$

25. $(2h + 6)(5h - 3)$

26. $(3w + 12)(w + 3)$

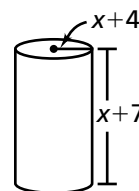
27. $(6c - 2)(9c - 8)$

Practice (continued)

Form G

Multiplying Binomials

28. What is the surface area of the cylinder at the right? Write your answer in simplified form.



29. The radius of a cylindrical popcorn tin is $(3x + 1)$ in. The height of the tin is three times the radius. What is the surface area of the cylinder? Write your answer in simplified form.

30. The radius of a cylindrical tennis ball can is $(2x + 1)$ cm. The height of the tennis ball can is six times the radius. What is the surface area of the cylinder? Write your answer in simplified form.

Simplify each product.

31. $(x + 3)(x^2 - 2x + 4)$

32. $(k^2 - 5k + 2)(k - 5)$

33. $(3a^2 + a + 4)(2a - 6)$

34. $(2x^2 + 2x - 6)(3x - 4)$

35. $(4g + 5)(2g^2 - 7g + 3)$

36. $(m^2 - 2m + 7)(3m + 6)$

37. $(2c + 8)(2c^2 - 4c - 1)$

38. $(t + 8)(3t^2 + 4t + 5)$

39. A medical center's rectangular parking lot currently has a length of 30 meters and a width of 20 meters. The center plans to expand both the length and the width of the parking lot by $2x$ meters. What polynomial in standard form represents the area of the expanded parking lot?

40. **Error Analysis** Describe and correct the error made in finding the product.

~~$(2x - 3)(x + 7)$~~

	x	7
$2x$	$2x^2$	$14x$
3	$3x$	21

~~$2x^2 + 17x + 21$~~

41. **Multi Step** The height of a painting is twice its width x . You want a 3 inch wide wooden frame for the painting. The area of the frame alone is 216 square inches.

- a. Draw a diagram that represents this situation.
- b. Write a variable expression for the area of the frame alone.
- c. What are the dimensions of the frame?