

GUIDED PRACTICE

Multiply.

SEE EXAMPLE 1
p. 512

1. $(2x^2)(7x^4)$

2. $(-5mn^3)(4m^2n^2)$

3. $(6rs^2)(s^3t^2)\left(\frac{1}{2}r^4t^3\right)$

4. $\left(\frac{1}{3}a^5\right)(12a)$

5. $(-3x^4y^2)(-7x^3y)$

6. $(-2pq^3)(5p^2q^2)(-3q^4)$

SEE EXAMPLE 2
p. 512

7. $4(x^2 + 2x + 1)$

8. $3ab(2a^2 + 3b^3)$

9. $2a^3b(3a^2b + ab^2)$

10. $-3x(x^2 - 4x + 6)$

11. $5x^2y(2xy^3 - y)$

12. $5m^2n^3 \cdot mn^2(4m - n)$

SEE EXAMPLE 3
p. 514

13. $(x + 1)(x - 2)$

14. $(x + 1)^2$

15. $(x - 2)^2$

16. $(y - 3)(y - 5)$

17. $(4a^3 - 2b)(a - 3b^2)$

18. $(m^2 - 2mn)(3mn + n^2)$

SEE EXAMPLE 4
p. 515

19. $(x + 5)(x^2 - 2x + 3)$

20. $(3x + 4)(x^2 - 5x + 2)$

21. $(2x - 4)(-3x^3 + 2x - 5)$

22. $(-4x + 6)(2x^3 - x^2 + 1)$

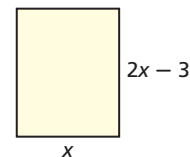
23. $(x - 5)(x^2 + x + 1)$

24. $(a + b)(a - b)(b - a)$

SEE EXAMPLE 5
p. 51625. **Photography** The length of a rectangular photograph is 3 inches less than twice the width.

a. Write a polynomial that represents the area of the photograph.

b. Find the area of the photograph when the width is 4 inches.



PRACTICE AND PROBLEM SOLVING

Multiply.

Independent Practice

For Exercises	See Example
26–34	1
35–43	2
44–52	3
53–61	4
62	5

Extra Practice

Skills Practice p. S17
Application Practice p. S34

26. $(3x^2)(8x^5)$

27. $(-2r^3s^4)(6r^2s)$

28. $(15xy^2)\left(\frac{1}{3}x^2z^3\right)(y^3z^4)$

29. $(-2a^3)(-5a)$

30. $(6x^3y^2)(-2x^2y)$

31. $(-3a^2b)(-2b^3)(-a^3b^2)$

32. $(7x^2)(xy^5)(2x^3y^2)$

33. $(-4a^3bc^2)(a^3b^2c)(3ab^4c^5)$

34. $(12mn^2)(2m^2n)(mn)$

35. $9s(s + 6)$

36. $9(2x^2 - 5x)$

37. $3x(9x^2 - 4x)$

38. $3(2x^2 + 5x + 4)$

39. $5s^2t^3(2s - 3t^2)$

40. $x^2y^3 \cdot 5x^2y(6x + y^2)$

41. $-5x(2x^2 - 3x - 1)$

42. $-2a^2b^3(3ab^2 - a^2b)$

43. $-7x^3y \cdot x^2y^2(2x - y)$

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

45. $(x + 4)^2$

46. $(m - 5)^2$

47. $(5x - 2)(x + 3)$

48. $(3x - 4)^2$

49. $(5x + 2)(2x - 1)$

50. $(x - 1)(x - 2)$

51. $(x - 8)(7x + 4)$

52. $(2x + 7)(3x + 7)$

53. $(x + 2)(x^2 - 3x + 5)$

54. $(2x + 5)(x^2 - 4x + 3)$

55. $(5x - 1)(-2x^3 + 4x - 3)$

56. $(x - 3)(x^2 - 5x + 6)$

57. $(2x^2 - 3)(4x^3 - x^2 + 7)$

58. $(x - 4)^3$

59. $(x - 2)(x^2 + 2x + 1)$

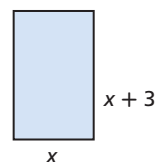
60. $(2x + 10)(4 - x + 6x^3)$

61. $(1 - x)^3$

62. **Geometry** The length of the rectangle at right is 3 feet longer than its width.

a. Write a polynomial that represents the area of the rectangle.

b. Find the area of the rectangle when the width is 5 feet.

63. A square tabletop has side lengths of $(4x - 6)$ units. Write a polynomial that represents the area of the tabletop.