

## GUIDED PRACTICE

Multiply.

SEE EXAMPLE 1

p. 492

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. 492

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. 494

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. 495

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

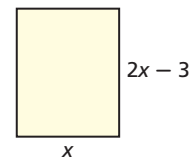
SEE EXAMPLE 5

p. 496

25. **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.  $(2x + 10)(4 - x + 6x^3)$

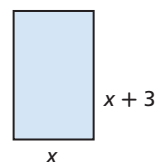
61.  $(1 - x)^3$



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.