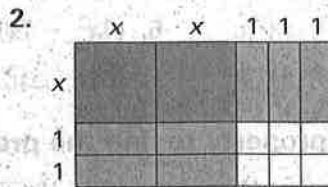
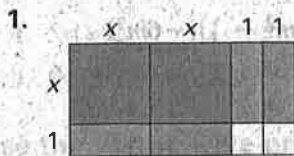


Practice A

For use with pages 584–589

Write an equation that represents the product of two binomials as shown in the area model.



Find the product.

- 3. $2(3x + 1)$
- 4. $-4(3x - 5)$
- 5. $(2x)(5x - 1)$
- 6. $6n(4 - 5n)$
- 7. $x^2(3x - 7)$
- 8. $(8m^2 - 4m + 1)(3m^2)$
- 9. $(-5t)(t^2 + 2t + 4)$
- 10. $3x^2(2x^2 - 4x - 7)$
- 11. $(5a^2 + 3a - 7)(-2a^2)$

Use the distributive property to find the product.

- 12. $(t + 3)(t + 3)$
- 13. $(n + 5)(n + 1)$
- 14. $(2x + 5)(x - 4)$
- 15. $(4a + 5)(2a + 3)$
- 16. $(3x^2 + 2x + 1)(x + 3)$
- 17. $(4x^2 - 3x + 2)(2x + 5)$

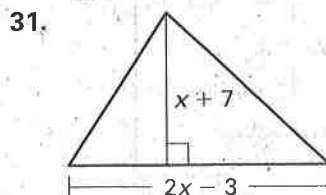
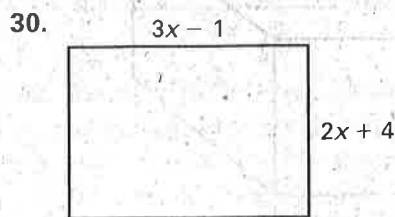
Use the FOIL pattern to find the product.

- 18. $(w + 5)(w + 2)$
- 19. $(3z + 1)(z + 2)$
- 20. $(x - 2)(x - 3)$
- 21. $(4x + 7)(x + 5)$
- 22. $(2x - 2)(x + 8)$
- 23. $(5n + 3)(4n - 2)$

Find the product.

- 24. $(3b - 2)(2b - 3)$
- 25. $(5x + 4)(3x - 2)$
- 26. $(10n + 5)(3n - 2)$
- 27. $(x - 7)(3x + 9)$
- 28. $(4t + 3)(4t + 3)$
- 29. $(x^2 + 3x + 1)(x - 2)$

Find an expression for the area of the figure. Give your answer as a quadratic polynomial.



Practice B

For use with pages 584–589

Find the product.

1. $5(2x + 3)$

2. $-7(5x - 3)$

3. $(6x)(3x - 4)$

4. $6x(2x^2 - 5x + 1)$

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

6. $(3m^2 - 1)(-6m^3)$

7. $2x^2(x^3 - x^2 + 8x - 5)$

8. $(6x - 5x^2 + 8)(3x)$

9. $(3a^2 - 7a + 9)(-5a^2)$

Use the distributive property to find the product.

10. $(2x + 3)(x - 1)$

11. $(t + 2)(t + 2)$

12. $(n + 4)(n + 2)$

13. $(3a + 7)(3a - 7)$

14. $(2x^2 - 5x + 3)(x + 4)$

15. $(2x^2 - 5x + 4)(3x + 1)$

Use the FOIL pattern to find the product.

16. $(m + 7)(m + 1)$

17. $(2t + 1)(t + 3)$

18. $(x - 4)(x - 2)$

19. $(3x + 8)(x + 2)$

20. $(5x - 3)(x + 7)$

21. $(6n + 1)(5n - 3)$

Find the product.

22. $(3x + 2)(x + 5)$

23. $(x + 5)(x - 6)$

24. $(x - 8)(x - 4)$

25. $(x - 7)(x + 4)$

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

27. $(5x - 2)(x - 6)$

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

29. $(x + 5)(x^2 + 4x)$

30. $(\frac{1}{2}x + 3)(4x + 5)$

31. $(\frac{1}{3}x - 2)(\frac{1}{2}x + 6)$

32. $(x + \frac{1}{2})(2x - \frac{1}{3})$

33. $(3x + 2)(2x + 5)$

34. $(2x - 1)(6x - 7)$

35. $(5x + 2)(5x^2 - 2)$

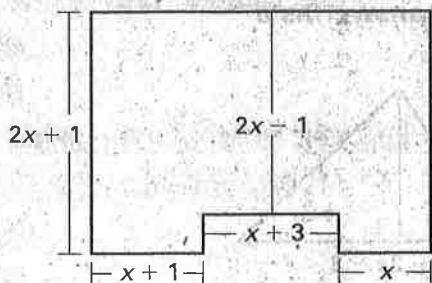
36. $(4x - 9)(3x + 1)$

37. $(2x^2 + 4)(3x + 1)$

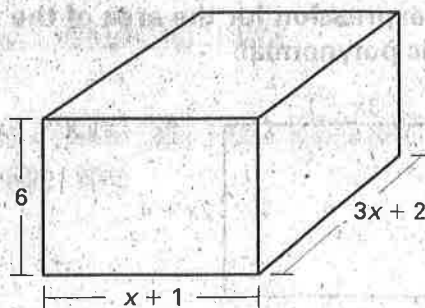
38. $(6x + 5)(2x - \frac{1}{3})$

39. $(4x - 1)(8x^2 + 3)$

40. **Floor Plan** The floor plan of a home is shown below. Find an expression for the area of the home. What is the area if $x = 20$ feet?



41. **Volume** Find an expression for the volume of the box. What is the volume if $x = 2$ inches?



Practice C

For use with pages 584–589

Find the product.

1. $7(3x + 2)$

2. $-9(4x - 6)$

3. $(3x)(5x - 7)$

4. $5x(-2x^2 - 6x + 3)$

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

6. $(4x^2 - \frac{1}{2})(-8x^3)$

7. $5x^2(x^3 - 3x^2 + 2x - 1)$

8. $(6x + 4x^2 - 8)(\frac{3}{2}x)$

9. $(3x^2 + 6x - 9)(-\frac{1}{3}x^2)$

Use the distributive property to find the product.

10. $(5x + 2)(x - 4)$

11. $(m + 5)(m - 5)$

12. $(t + 8)(t + 4)$

13. $(4n + 7)(2n - 5)$

14. $(3x^2 - 4x + 1)(x + 5)$

15. $(4x^2 - 6x + 8)(2x + \frac{1}{2})$

Use the FOIL pattern to find the product.

16. $(a + 3)(a + 5)$

17. $(2t + 7)(t + 5)$

18. $(x - 6)(x - 4)$

19. $(5x + 1)(3x - 2)$

20. $(x - \frac{3}{2})(2x + 4)$

21. $(2n + \frac{1}{3})(6n - 3)$

Find the product.

22. $(x - 1)(x + 8)$

23. $(x + 6)(x - 6)$

24. $(x - 8)(x - 4)$

25. $(5x - 2)(3x + 7)$

26. $(x + 8)(4x - 5)$

27. $(7x - 5)(x - 3)$

28. $(x^2 + 4)(x - 5)$

29. $(3x + 4)(x^2 + 5x)$

30. $(\frac{1}{3}x - 3)(6x + 7)$

31. $(\frac{1}{2}x + 8)(\frac{1}{2}x - 4)$

32. $(x + \frac{1}{3})(x - \frac{1}{6})$

33. $(7x - 2)(2x - 7)$

34. $(2.5x + 1)(3.1x + 2)$

35. $(x + \frac{3}{4})(x - \frac{1}{4})$

36. $(0.5x - 4)(6x + 2)$

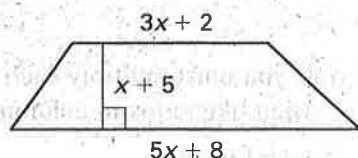
37. $(5x^2 + 3)(2x - 3)$

38. $(7x^2 + 2)(5x - \frac{1}{2})$

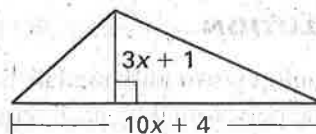
39. $(6x - 9)(4x^2 + 1)$

Find an expression for the area of the figure. Give your answer as a quadratic polynomial.

40.



41.



42. **Exercise Bike** You ride an exercise bike that has an electronic odometer and clock. Each week you increase the rate R and time T at which you ride the bike. The equation $R = \frac{2}{5}x + 14$ models the rate at which you ride, where R is measured in miles per hour and $x = 0$ corresponds to week 0. The equation $T = \frac{1}{30}x + \frac{1}{12}$ models the amount of time you ride at each workout, where T is measured in hours and $x = 0$ corresponds to week 0. Find a model for the distance D you ride in a workout.