

Practice B

For use with pages 619–624

Match the trinomial with a correct factorization.

- | | |
|----------------------|----------------------|
| 1. $x^2 - 16$ | A. $2(x + 4)^2$ |
| 2. $x^2 + 8x + 16$ | B. $(x + 4)^2$ |
| 3. $2x^2 + 16x + 32$ | C. $(x - 4)^2$ |
| 4. $2x^2 - 16x + 32$ | D. $2(x - 4)(x + 4)$ |
| 5. $x^2 - 8x + 16$ | E. $(x + 4)(x - 4)$ |
| 6. $2x^2 - 32$ | F. $2(x - 4)^2$ |

Factor the expression.

- | | | |
|------------------|------------------|------------------------|
| 7. $x^2 - 9$ | 8. $x^2 - 144$ | 9. $x^2 - \frac{1}{9}$ |
| 10. $x^2 - 0.16$ | 11. $4x^2 - 49$ | 12. $9x^2 - 25$ |
| 13. $p^2 - q^2$ | 14. $64x^2 - 9y$ | 15. $100 - x^2$ |
| 16. $49 - x^2$ | 17. $4a^2 - b^2$ | 18. $12x^2 - 48$ |

Factor the expression.

- | | | |
|-------------------------------|--------------------------|-------------------------|
| 19. $x^2 + 18x + 81$ | 20. $x^2 - 8x + 16$ | 21. $4x^2 + 4x + 1$ |
| 22. $25x^2 - 30x + 9$ | 23. $a^2 - 2ab + b^2$ | 24. $x^2 + 4xy + 4y^2$ |
| 25. $4x^2 + 2x + \frac{1}{4}$ | 26. $9x^2 - 0.6x + 0.01$ | 27. $8x^2 + 8xy + 2y^2$ |
| 28. $3x^2 - 30xy + 75y^2$ | 29. $25 - 20x + 4x^2$ | 30. $36 + 48x + 16x^2$ |

Use factoring to solve the equation. Use a graphing calculator to check your solution if you wish.

- | | | |
|---------------------------|---------------------------|---|
| 31. $3x^2 - 48 = 0$ | 32. $4x^2 - 20x + 25 = 0$ | 33. $3x^2 - \frac{3}{4} = 0$ |
| 34. $9x^2 - 24x + 16 = 0$ | 35. $-5x^2 + 20 = 0$ | 36. $\frac{4}{3}x^2 + \frac{20}{3}x + \frac{25}{3} = 0$ |

37. **Quilt** A square quilt for a child's bed has a border made up of 36 pieces with an area of x each, and 4 small squares with an area of 1 square inch each. The main part of the quilt is made up of 81 squares with an area of x^2 each. Find an expression for the area of the quilt. Factor the expression. If the quilt is 5 feet by 5 feet, what are the dimensions of the inside squares?

