

LESSON
8.6

Practice A

For use with the lesson "Factor $ax^2 + bx + c$ "
Match the trinomial with its correct factorization.

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| 1. $4x^2 - 2x - 2$ | A. $(4x + 1)(x - 2)$ |
| 2. $4x^2 - 7x - 2$ | B. $(2x + 1)(2x - 2)$ |
| 3. $4x^2 + 7x - 2$ | C. $(4x - 1)(x + 2)$ |

Factor the trinomial.

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| 4. $-x^2 - 2x + 15$ | 5. $-m^2 + 3m - 2$ | 6. $-p^2 + 5p + 14$ |
| 7. $2w^2 + 7w + 3$ | 8. $3y^2 + 5y + 2$ | 9. $2b^2 + b - 1$ |
| 10. $3n^2 - 3$ | 11. $5a^2 + 13a - 6$ | 12. $2z^2 + 9z - 5$ |
| 13. $7d^2 - 15d + 2$ | 14. $2r^2 - 12r + 10$ | 15. $6s^2 - 13s + 2$ |

Solve the equation.

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|---------------------------|--------------------------|---------------------------|
| 16. $2x^2 + 7x - 15 = 0$ | 17. $3n^2 + 13n + 4 = 0$ | 18. $4b^2 + 2b - 2 = 0$ |
| 19. $2m^2 + 5m - 3 = 0$ | 20. $3p^2 + 11p - 4 = 0$ | 21. $3y^2 + 11y + 10 = 0$ |
| 22. $4r^2 + 8r + 3 = 0$ | 23. $9w^2 + 3w - 2 = 0$ | 24. $5a^2 - 8a - 4 = 0$ |
| 25. $3c^2 + 19c - 14 = 0$ | 26. $8z^2 + 6z + 1 = 0$ | 27. $12d^2 + 14d - 6 = 0$ |

Find the zeros of the polynomial function.

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| 28. $f(x) = -x^2 - 4x + 5$ | 29. $g(x) = 3x^2 - 13x - 10$ | 30. $h(x) = -2x^2 + 9x + 5$ |
| 31. $g(x) = -x^2 + 5x - 6$ | 32. $f(x) = 4x^2 - 9x + 2$ | 33. $g(x) = -2x^2 - 9x + 18$ |
| 34. $h(x) = 2x^2 + 7x - 4$ | 35. $h(x) = 6x^2 + 3x - 9$ | 36. $f(x) = -4x^2 - 9x - 2$ |

37. Ball Toss A ball is tossed into the air from a height of 8 feet with an initial velocity of 8 feet per second. Find the time t (in seconds) it takes for the object to reach the ground by solving the equation $-16t^2 + 8t + 8 = 0$.

38. Wallpaper You trimmed a large strip of wallpaper from a scrap to fit into the corner of a wall you are wallpapering. You trimmed 15 inches from the length and 6 inches from the width. The area of the resulting strip of wallpaper is 684 square inches.

- If the length of the original strip of wallpaper is four times the original width, write a polynomial that represents the area of the trimmed strip of wallpaper.
- What are the dimensions of the original scrap of wallpaper?

