

**Practice B**

For use with pages 611–617

**Match the trinomial with a correct factorization.**

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|----------------------|----------------------|
| 1. $2x^2 + 2x - 12$  | A. $(2x + 3)(x + 4)$ |
| 2. $2x^2 + 14x + 12$ | B. $2(x - 2)(x + 3)$ |
| 3. $2x^2 - 10x + 12$ | C. $2(x + 1)(x + 6)$ |
| 4. $2x^2 - 2x - 12$  | D. $2(x - 1)(x - 6)$ |
| 5. $2x^2 + 11x + 12$ | E. $2(x + 2)(x - 3)$ |
| 6. $2x^2 - 14x + 12$ | F. $2(x - 2)(x - 3)$ |

**Choose the correct factorization. If neither is correct, find the correct factorization.**

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|----------------------|----------------------|-----------------------|
| 7. $2x^2 + 4x - 16$  | 8. $5x^2 - 17x + 6$  | 9. $6x^2 - 17x + 5$   |
| A. $(2x + 4)(x - 4)$ | A. $(5x + 1)(x + 6)$ | A. $(3x - 1)(2x - 5)$ |
| B. $(2x + 8)(x - 2)$ | B. $(5x - 3)(x - 2)$ | B. $(3x + 1)(2x + 5)$ |

**Factor the trinomial if possible. If it cannot be factored, write *not factorable*.**

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|-----------------------|----------------------|-----------------------|
| 10. $2x^2 + 11x + 15$ | 11. $3x^2 + 10x - 7$ | 12. $10x^2 + 13x - 3$ |
| 13. $10x^2 + 17x + 3$ | 14. $8x^2 + 2x - 3$  | 15. $3x^2 + 2x - 2$   |
| 16. $12x^2 + 16x - 3$ | 17. $4x^2 - 3x + 8$  | 18. $10x^2 - 9x - 9$  |

**Solve the equation by factoring.**

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|----------------------------|---------------------------|--------------------------|
| 19. $6x^2 - 10x - 4 = 0$   | 20. $6x^2 - 27x + 27 = 0$ | 21. $3x^2 + 5x + 2 = 0$  |
| 22. $8x^2 + 10x + 3 = 0$   | 23. $4x^2 - 8x - 5 = 0$   | 24. $12x^2 - 5x - 3 = 0$ |
| 25. $15x^2 + 16x - 15 = 0$ | 26. $8x^2 - 22x + 5 = 0$  | 27. $6x^2 + 5x + 1 = 0$  |

28. **Summer Business** Your friend's weekly revenue  $R$  (in dollars) from her tie-dye T-shirt business can be modeled by

$$R = -2t^2 + 37t + 60$$

where  $t$  represents the week of sales, with  $t = 0$  for the first week. In the first week, 3 T-shirts were sold. After that, the sales increased by 2 T-shirts per week. Did the price of T-shirts remain constant during the 8-week summer season? Explain.

29. **Cliff Diving** A cliff diver jumps from a ledge 96 feet above the ocean with an initial upward velocity of 16 feet per second. How long will it take until the diver enters the water?