

**Practice C**

For use with pages 256–263

**Factor the trinomial. If it cannot be factored, say so.**

- |                       |                         |                       |
|-----------------------|-------------------------|-----------------------|
| 1. $x^2 + 19x + 90$   | 2. $x^2 - 16x + 55$     | 3. $x^2 - 6x - 91$    |
| 4. $x^2 + 28x + 195$  | 5. $x^2 - 29x + 204$    | 6. $x^2 + 3x - 154$   |
| 7. $2x^2 - 5x - 42$   | 8. $3x^2 - 13x + 12$    | 9. $5x^2 + 43x - 18$  |
| 10. $6x^2 + 29x + 35$ | 11. $8x^2 - 10x + 3$    | 12. $15x^2 - x - 2$   |
| 13. $8x^2 - 18x - 5$  | 14. $2x^2 - 5x - 88$    | 15. $3x^2 + 43x - 30$ |
| 16. $3x^2 + 7x - 2$   | 17. $10x^2 - 89x + 156$ | 18. $4x^2 + 11x + 13$ |

**Factor the expression.**

- |                            |                         |                          |
|----------------------------|-------------------------|--------------------------|
| 19. $3x^2 - 42x + 147$     | 20. $5x^2 - 20x + 20$   | 21. $2x^2 + 32x + 128$   |
| 22. $-4x^2 - 24x - 36$     | 23. $3x^2 - 243$        | 24. $-5x^2 + 605$        |
| 25. $6x^2 + 26x + 28$      | 26. $12x^2 + 54x - 30$  | 27. $12x^3 - 10x^2 - 8x$ |
| 28. $-20x^3 - 58x^2 + 42x$ | 29. $9x^5 + 6x^4 + x^3$ | 30. $8x^4 + 2x^3 + x^2$  |

**Solve the equation.**

- |                                |                                    |                              |
|--------------------------------|------------------------------------|------------------------------|
| 31. $x^2 - 22x + 120 = 0$      | 32. $2x^2 + 17x + 21 = 0$          | 33. $5x^2 + 14x - 3 = 0$     |
| 34. $4x^2 + 20x + 25 = 0$      | 35. $6x^2 - 7x = 3$                | 36. $6x^2 + 5x = 99$         |
| 37. $4x^2 + 10x = x^2 - x + 4$ | 38. $3x^2 - x - 40 = x^2 + 2x - 5$ | 39. $(x - 3)^2 = 4(11 - x)$  |
| 40. $(x + 2)^2 + x(x - 3) = 1$ | 41. $(x + 1)^2 - 3(x - 1)^2 = 6$   | 42. $(2x + 1)^2 = (x + 2)^2$ |

43. **Business** If a gym charges its members \$300 per year to join, they get 1000 members. For each \$2 increase in price they can expect to lose 5 members. How much should the gym charge to maximize its revenue? What is the gym's maximum revenue?