

**Practice 9-7****Factoring Special Cases****Factor each expression.**

- |                        |                        |                           |
|------------------------|------------------------|---------------------------|
| 1. $x^2 - 9$           | 2. $4m^2 - 1$          | 3. $a^2 + 2a + 1$         |
| 4. $4x^2 + 12x + 9$    | 5. $x^2 - 22x + 121$   | 6. $n^2 - 4$              |
| 7. $9x^2 - 4$          | 8. $16c^2 - 49$        | 9. $9x^2 - 30x + 25$      |
| 10. $4x^2 - 20x + 25$  | 11. $2a^2 - 18$        | 12. $x^2 - 24x + 144$     |
| 13. $3n^2 - 3$         | 14. $9h^2 + 60h + 100$ | 15. $9d^2 - 49$           |
| 16. $81a^2 - 400$      | 17. $r^2 - 36$         | 18. $3a^2 - 48$           |
| 19. $b^2 + 4b + 4$     | 20. $10x^2 - 90$       | 21. $25x^2 - 64$          |
| 22. $12w^2 - 27$       | 23. $g^3 - 25g$        | 24. $x^2 + 6x + 9$        |
| 25. $a^2 - 25$         | 26. $36s^2 - 225$      | 27. $4b^2 + 44b + 121$    |
| 28. $x^2 - 16x + 64$   | 29. $x^2 - 2x + 1$     | 30. $d^2 - 49$            |
| 31. $x^3 - 36x$        | 32. $9y^2 - 289$       | 33. $x^2 - 30x + 225$     |
| 34. $100a^2 - 9$       | 35. $2x^2 + 4x + 2$    | 36. $5n^3 - 20n$          |
| 37. $9n^2 + 12n + 4$   | 38. $d^2 - 169$        | 39. $4a^2 - 81$           |
| 40. $x^2 - 121$        | 41. $5x^2 + 40x + 80$  | 42. $16n^2 + 56n + 49$    |
| 43. $3n^2 - 30n + 75$  | 44. $a^2 + 26a + 169$  | 45. $25x^2 - 144$         |
| 46. $9d^2 - 64$        | 47. $n^2 - 28n + 196$  | 48. $49a^2 - 14a + 1$     |
| 49. $y^2 + 8y + 16$    | 50. $y^2 - 400$        | 51. $x^2 - 10x + 25$      |
| 52. $4x^2 - 60x + 225$ | 53. $3x^2 - 363$       | 54. $y^2 - 81$            |
| 55. $a^2 - 100$        | 56. $256a^2 - 1$       | 57. $n^2 + 34n + 289$     |
| 58. $2d^3 - 50d$       | 59. $y^2 + 22y + 121$  | 60. $144x^2 - 25$         |
| 61. $4x^2 - 169$       | 62. $x^2 - 12x + 36$   | 63. $64r^2 + 80r + 25$    |
| 64. $50m^3 - 32m$      | 65. $b^2 - 225$        | 66. $x^2 - 18x + 81$      |
| 67. $b^2 - 64$         | 68. $16x^2 - 72x + 81$ | 69. $b^2 - 256$           |
| 70. $x^2 + 24x + 144$  | 71. $225x^2 - 16$      | 72. $2x^3 + 40x^2 + 200x$ |
| 73. $4r^2 - 25$        | 74. $16x^2 + 8x + 1$   | 75. $b^2 - 14b + 49$      |
| 76. $x^2 + 30x + 225$  | 77. $m^2 - 28m + 196$  | 78. $9r^2 - 256$          |
| 79. $b^2 + 20b + 100$  | 80. $m^2 - 16$         | 81. $4x^2 - 32x + 64$     |
| 82. $x^2 - 196$        | 83. $8x^3 - 32x$       | 84. $25x^2 - 30x + 9$     |
| 85. $8m^2 - 16m + 8$   | 86. $9x^2 - 400$       | 87. $m^2 - 144$           |