

**9.3**

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Date\_\_\_\_\_ Period\_\_\_\_

**Factor each.**

1)  $x^3 - 64 = 0$

2)  $x^3 + 27 = 0$

3)  $x^2 - 2x - 8 = 0$

4)  $x^4 + 5x^3 + 4x^2 = 0$

5)  $x^4 + 2x^2 - 3 = 0$

6)  $x^3 - 6x^2 + 8x = 0$

7)  $x^3 - x^2 - 20x = 0$

8)  $x^4 - 13x^2 + 42 = 0$

9)  $x^3 - x^2 + 5x - 5 = 0$

10)  $x^4 - 3x^2 - 18 = 0$

11)  $x^4 - 9x^2 + 18 = 0$

12)  $x^4 + 5x^2 + 6 = 0$

13)  $x^4 + x^3 + 4x^2 + 4x = 0$

14)  $x^4 - 8x^2 + 12 = 0$

15)  $x^3 + 2x^2 - 3x = 0$

### Answers to 9.3 (ID: 1)

- |                                 |                                  |                              |
|---------------------------------|----------------------------------|------------------------------|
| 1) $(x - 4)(x^2 + 4x + 16) = 0$ | 2) $(x + 3)(x^2 - 3x + 9) = 0$   | 3) $(x + 2)(x - 4) = 0$      |
| 4) $x^2(x + 1)(x + 4) = 0$      | 5) $(x - 1)(x + 1)(x^2 + 3) = 0$ | 6) $x(x - 4)(x - 2) = 0$     |
| 7) $x(x + 4)(x - 5) = 0$        | 8) $(x^2 - 7)(x^2 - 6) = 0$      | 9) $(x - 1)(x^2 + 5) = 0$    |
| 10) $(x^2 + 3)(x^2 - 6) = 0$    | 11) $(x^2 - 3)(x^2 - 6) = 0$     | 12) $(x^2 + 3)(x^2 + 2) = 0$ |
| 13) $x(x + 1)(x^2 + 4) = 0$     | 14) $(x^2 - 6)(x^2 - 2) = 0$     | 15) $x(x - 1)(x + 3) = 0$    |