

**Practice 6-4** ..... **Solving Polynomial Equations**

Factor the expression on the left side of each equation. Then solve the equation.

1.  $8x^3 - 27 = 0$

2.  $x^3 + 64 = 0$

5.  $4x^3 - 32 = 0$

6.  $27x^3 + 1 = 0$

9.  $x^4 - 5x^2 + 4 = 0$

10.  $x^4 - 12x^2 + 11 = 0$

11.  $x^4 - 10x^2 + 16 = 0$

12.  $x^4 - 8x^2 + 16 = 0$

13.  $x^4 - 9x^2 + 14 = 0$

14.  $x^4 + 13x^2 + 36 = 0$

Solve each equation by graphing. Where necessary, round to the nearest *thousandth*.

18.  $2x^4 = 9x^2 - 4$

19.  $x^2 - 16x = -1$

Factor each expression.

25.  $x^3 - 125$

26.  $x^4 - 8x^2 + 15$

27.  $x^4 + x^2 - 2$

28.  $x^3 + 1$