

## Factor Theorem and +/- Cubes

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

**Factor each. One factor has been given.**

1)  $y = x^3 + 7x^2 + 16x + 12; x + 2$

2)  $y = x^3 + 2x^2 - 5x - 6; x + 3$

3)  $y = x^3 - x^2 - 9x + 9; x + 3$

4)  $y = x^3 - 4x^2 - 11x + 30; x - 5$

5)  $y = x^3 - 4x^2 + x + 6; x - 3$

6)  $y = x^3 - 12x^2 - 15x + 26; x + 2$

**Factor each.**

7)  $x^3 - 8 = 0$

8)  $x^3 - 27 = 0$

9)  $x^3 - 125 = 0$

10)  $x^3 + 125 = 0$

11)  $x^3 - 1 = 0$

12)  $x^3 + 27 = 0$

13)  $x^3 + 8 = 0$

14)  $x^3 + 1 = 0$

15)  $x^3 - 64 = 0$

16)  $x^3 + 64 = 0$