

## 13.1.D1 ~ The Quadratic Formula

Past due on \_\_\_\_\_ Period \_\_\_\_\_

Use the Quadratic Formula to determine the approximate zeros or roots for each function or equation. Round answers to the nearest hundredth. (If necessary, refer to the 13.1 example "Using the Quadratic Formula to Determine the Zeros of a Quadratic Function or the Roots of a Quadratic Equation" in the Chapter 13 Summary.)

1)  $f(x) = x^2 + 3x - 5$

2)  $2x^2 + 6x - 7 = 2$

3)  $f(x) = -8x^2 + 2x + 1$

4)  $4x^2 - x - 1 = 5$

5)  $f(x) = -3x^2 - x + 7$

6)  $3x^2 + x + 3 = 5$

**Solve each quadratic equation by taking square roots. Rewrite the roots in radical form. DO NOT APPROXIMATE. (If necessary, refer to the 12.6 example, "Extracting Square Roots to Solve Equations" in the Chapter 12 Summary.)**

7)  $b^2 - 4 = 59$

8)  $-2a^2 = -250$

**Determine the roots of each quadratic equation via factoring and the Zero Product Property. (If necessary, refer to the 12.4 example "Solving Quadratic Equations Using Factoring" in the Chapter 12 Summary.)**

9)  $2x^2 + 27 = 21x$

10)  $10x^2 - 10 = -21x$