College Algebra Fundamentals

Section P-2 (Part 4): Solving Equations

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**:

* Students will be able to solve quadratic equations by completing the square.
* Students will be able to solve quadratic equations by using the quadratic formula.

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| **Main Idea** | **Notes** |
| **Vocabulary:**  **Example 1: Creating a Perfect Square Trinomial**  **Example 2: Creating a Perfect Square Trinomial** | What do we want to create when completing the square?  Examples:  Why are these called perfect square trinomials?  In the following perfect square trinomial, the constant term is missing:  x2 + 14x + \_\_\_\_  How do we find the missing constant term? What is it?  Find the missing term.   1. x2 + 20x + \_\_\_\_\_\_\_ 2. x2 - 4x + \_\_\_\_\_\_\_\_ 3. x2 + 5x + \_\_\_\_\_\_\_ |
| **Vocabulary:** | Solving Quadratic Equations by Completing the Square:  (use x² + 8x + 20 = 0 as an example for each of your steps)  Step 1:  Step 2:  Step 3:  Step 4:  Quadratic Formula: |
| **Vocabulary:** |
| **Example 3: Solve Using the Quadratic Formula** | 1. 3x2 – 5x + 2 = 0 2. 2x2 – 5x – 9 = 0 |
| **Homework:** |  |