College Algebra Fundamentals

Section P-2 (Part 1): Solving Equations

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

**Objectives**:

* Students will be able to transform equations into equivalent equations.
* Students will be able to solve linear equations.

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| **Main Idea** | **Notes** |
| **Vocabulary:**  **Example 1: Solve in the Set of Rational Numbers** | Equation:  Example:  What does solving an equation in x mean?  Such values are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Example:  What do the solutions of an equation depend on?  In the set of rational numbers, does x² = 10 have a solution? If so what is it? If not, explain why not. |
| **Example 2: Solve in the Set of Real Numbers** | In the set of real numbers, does x² = 10 have a solution? If so what is it? If not, explain why not.  Identity: |
| **Vocabulary:** |
| **Example 3: Analyzing Identities** | Why is x² - 9 = (x + 3)(x – 3) an identity? |
| **Vocabulary:** | Conditional Equation: |
| **Example 4: Analyzing Conditional Equations** | Why is x² - 9 = 0 a conditional equation? |
| **Vocabulary:** | The 11th Commandment for Equations:  Linear Equation:  How many solutions does a linear equation have? |
| **Example 5: Solving Linear Equations** | Solve for the variable.   1. x + 7 = 15 b) x – 7 = 12 c) 5n = 35   d) 20 + h = 41 e) c/8 = 3 f)  g)  h)  i) |
| **Vocabulary:** | Solving a Conditional Equation: |
| **Homework:** |  |