

## 4.5 Day 2 Notes

**Objectives: Solve Quadratic Equations by Completing the Square**

**Solve each equation by completing the square.**

1)  $x^2 + 10x + 9 = 0$

2)  $x^2 + 6x + 8 = 0$

3)  $x^2 - 2x - 3 = 0$

4)  $x^2 + 32x + 255 = 0$

**Not all solutions of quadratic equations are real numbers. In some cases, the solutions are complex number of the form  $a + bi$ , where  $b \neq 0$ .**

**Ex.  $x^2 + 8x + 22 = 0$**

**Ex.  $x^2 + 2x + 2 = 0$**

$$5) x^2 - 6x + 25 = 0$$

$$6) x^2 + 4x + 11 = 0$$

**When the coefficient of the quadratic term is not 1, you must divide the equation by that coefficient before completing the square and solving the problem.**

$$\text{Ex. } 2x^2 - 12x + 8 = 0$$

$$\text{Ex. } 2x^2 - 3x - 5 = 0$$

$$7) 4x^2 + 32x + 16 = 0$$

$$8) 2x^2 + 8x + 5 = 0$$