

Name:

Date:

Topic:

Class:

**Main Ideas/Questions****Notes/Examples****THE QUADRATIC FORMULA**

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

① Write the equation in **STANDARD FORM**,  $ax^2 + bx + c = 0$

② Identify a, b, and c. **SUBSTITUTE** them into the formula.

③ **SIMPLIFY!**

**Directions:** Solve each quadratic equation below using the quadratic formula.

1.  $x^2 + 2x - 53 = 0$

2.  $6x^2 - 11x - 10 = 0$

3.  $x^2 - 8x + 4 = 0$

4.  $2x^2 - 20x + 89 = -87$

5.  $x^2 + 2x + 37 = 0$

6.  $3x^2 = 3 - 42x$

$$7. 2x^2 - 28x = -134$$

$$8. -2x^2 + 17 = 8x - 1$$

$$9. -8x^2 + 7 = 4$$

$$10. -x^2 + 10x = 8$$

$$11. -3x^2 + 8x - 7 = 0$$

$$12. 5x^2 + 9 = 4x + 5$$