| Name: | Date: |

| Topic: | Class: |

Main Ideas/Questions	Notes/Examples

THE QUADRATIC FORMULA

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

The quadratic formula is another method to use to solve a quadratic equation. Solve the equation below using the quadratic formula.

	Steps	Example
❶	Make sure the equation is set equal to 0 and written in **standard form**.	$x^2 - 5x - 36 = 0$
❷	Identify a, b, and c.	
❸	**Substitute** these values into the formula and SIMPLIFY!	

YOU TRY!

Directions: Solve each equation using the quadratic formula.

1. $x^2 - 8x = 20$

2. $2x^2 + 7x + 3 = 12$

3. $3x^2 - 12 = 0$

4. $x^2 + 15x = 6x$

5. $-x^2 - 10x - 21 = 0$

6. $4x^2 + 9x = 12x$

	7. $x^2 + 7x = x - 10$	**8.** $3x^2 - 5x = 4 - 3x^2$

IRRATIONAL SOLUTIONS

Directions: Solve each equation using the quadratic formula. Write all irrational solutions in simplest radical form.

9. $x^2 + 4x + 1 = 0$	**10.** $-x^2 - 2x + 7 = 0$
11. $x^2 + x + 9 = 20$	**12.** $4x^2 - 7x = -2$
13. $x^2 + 3 = 8x - x^2$	**14.** $3x^2 - 6x = 12$