

Name: \_\_\_\_\_

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

Topic: \_\_\_\_\_

Class: \_\_\_\_\_

Main Ideas/Questions

Notes/Examples

# SOLVING QUADRATICS

by "Square Roots"

Quadratic equations of the form \_\_\_\_\_

(no "bx" term!) can be solved using **square roots**.

Steps

Example

① Isolate  $x^2$ .

$$x^2 - 49 = 0$$

② Take the **SQUARE ROOT** of both sides.

**REMEMBER THAT A POSITIVE NUMBER ALWAYS HAS TWO SQUARE ROOTS!**

**Directions:** Solve the following quadratic equations by square roots.

## YOU TRY!

if there is  
no b term,  
b =

1.  $x^2 - 16 = 0$

2.  $x^2 - 100 = 0$

3.  $x^2 + 25 = 0$

4.  $x^2 + 7 = 88$

5.  $x^2 - 5 = -4$

6.  $6x^2 = 54$

7.  $-2x^2 = -98$

8.  $\frac{3}{4}x^2 = 48$

9.  $3x^2 - 108 = 0$

10.  $5x^2 - 45 = 0$

$$11. 7x^2 + 66 = 3$$

$$12. \frac{1}{2}x^2 + 3 = 75$$

$$13. 9x^2 - 16 = 0$$

$$14. 25x^2 + 10 = 46$$

$$15. 5x^2 - 1 = x^2$$

$$16. 16x^2 - 34 = 15$$

## IRRATIONAL SOLUTIONS

Zeros can be irrational!! Solve the following quadratic equations.  
Write all answers in simplest radical form.

$$17. x^2 - 3 = 0$$

$$18. x^2 + 8 = 56$$

$$19. 2x^2 - 126 = 0$$

$$20. -x^2 - 10 = 18$$