Algebra 2

3-05 Solve Quadratic Equations using the Quadratic Formula (3.4)

Work with a Partner: Solve $ax^2 + bx + c = 0$

Quadratic Formula

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

• _____ works for quadratic equations.

Discriminant

- The part under the square root, ______, tells you what kind of solutions you are going to have.
- $b^2 4ac > 0 \rightarrow$ ______ distinct ______ solutions
- $b^2 4ac = 0 \rightarrow \text{exactly}$ solution (a double solution)
- $b^2 4ac < 0 \rightarrow$ ______ distinct ______ solutions

What types of solutions to $5x^2 + 3x - 4 = 0$?

Solve $5x^2 + 3x = 4$

Solve $4x^2 - 6x + 3 = 0$

Algebra 2 3-05	Name:
Find a possible pair of integer values for <i>a</i> and <i>c</i> so that the equation	
$ax^2 - 12x + c = 0$ has the given number and type of solution(s). Then write the equation.	
a. one real solution	
b. two imaginary solutions	

Real life problems

• The ______ of an object that is hit or thrown up or down can be modeled by

$$h(t) = -16t^2 + v_0 t + s_0$$

• where v₀ is the initial _____ (up +, down –), and s₀ is the initial _

123 #1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 25, 27, 39, 61, Mixed Review = 20