

**\*Objectives:**

*The Quadratic Formula

*Discriminant

*Discriminant and Solutions of Quadratic Equations		
*Value of the Discriminant	*Number of Solutions	*x-intercepts of the Graph

**Got It?** 1. What are the solutions? Use the Quadratic Formula.

a.  $x^2 + 4x = -4$

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

**Got It?** 2. a. In Problem 2, what is the least amount you can charge for each CD to make a \$100 profit?

The total profit  $p$  depends on the amount  $x$  that your band charges for each CD. The equation  $p = -x^2 + 48x - 300$  models the profit

**Got It?** 3. What is the number of real solutions of each equation?

a.  $2x^2 - 3x + 7 = 0$

b.  $x^2 = 6x + 5$

**Got It?** 4. **Reasoning** Without solving an equation, will the golf ball in Problem 4 reach a height of 110 ft? Explain.

**Projectile Motion** You hit a golf ball into the air from a height of 1 in. above the ground with an initial vertical velocity of 85 ft/s. The function  $h = -16t^2 + 85t + \frac{1}{12}$  models the height, in feet, of the ball at time  $t$ , in seconds.

**Inclass:** p. 245 #20, 24, 34, 38

**Homework:** p. 245 #11-37(odd)

**Interactmath:** #11, 13, 20, 25, 29, 33, 37