

Discriminant

$$b^2 - 4ac$$

two real solutions

one real solution

two imaginary solutions

# The Quadratic Formula

$$ax^2 + bx + c = 0$$



How do you use the quadratic formula to solve an equation with two imaginary solutions?

## Example 3

$$-x^2 + 2x = 5$$

Step 1: Put into standard form.  
(Set = 0 and keep  $x^2$  positive.)

Step 2: Identify a, b, c.

Step 3: Substitute into the quadratic formula and simplify.

How do you use the quadratic formula to solve an equation with one real solution?

## Example 2

$$2x^2 = 8x - 8$$

Step 1: Put into standard form.  
(Set = 0 and keep  $x^2$  positive.)

Step 2: Identify a, b, c.

Step 3: Substitute into the quadratic formula and simplify.

## Example 1

How do you use the quadratic formula to solve an equation with two real solutions?

$$x^2 + 7x = 6$$

Step 1: Put into standard form.  
(Set = 0 and keep  $x^2$  positive.)

Step 2: Identify a, b, c.

Step 3: Substitute into the quadratic formula and simplify.