

**THE DISCRIMINANT****LEARNING GOALS**

- Learn how to use the discriminant to determine the number of solutions to a quadratic equations.

**NUMBER OF SOLUTIONS**

Recall: The Quadratic Formula

The discriminant is the part inside the square root.

**EXAMPLE**

Solve the following quadratic equations using the quadratic formula and compare the number of solutions to the value of the discriminant.

$$y = (x - 3)^2 + 2$$

$$y = -(x - 2)^2 + 4$$

$$y = (x - 5)^2$$

**WHAT THE DISCRIMINANT TELLS YOU**

<b>Rule</b>	$b^2 - 4ac > 0$	$b^2 - 4ac < 0$	$b^2 - 4ac = 0$
<b>Number of Solutions</b>			

**HOMEFUN ☺**

P300 Q5, 10-15 – Use the discriminant!