

Daily Agenda

Learning Target: I can solve quadratic equations and find x-intercepts.

**Homework**  $y = \frac{1}{4}(x-1)^2$  **Assessments**

3.3 Day 1 Formative      3.1 to 3.3 Quiz 10/12  
 - No Calc  
 Chapter Test 10/24  
 - Calc and No Calc

①  $y = -(x+1)^2 - 3$   
 ②  $y = -2(x)^2 - 1$

Anything is possible. Anything can be.  
 -Shel Silverstein

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### 3.3 x-intercepts and Quadratic Formula

**Factoring Review**

<p>GCF</p> $2x^2 - 8x$ $2x(x-4)$	<p>Trinomial</p> $x^2 + 7x + 12$ $(x+3)(x+4)$
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### 3.3 x-intercepts and Quadratic Formula

**Factoring Review**

$3x^2 + 7x + 2$ $(3x+1)(x+2)$	$4x^2 - 9x + 2$ $(4x-1)(x-2)$
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x-intercept is where y=0

**Solve the equation**

$$x^2 - 5x + 6 = 0$$

$$(x^2 - 3x)(-2x + 6)$$

$$x(x-3) - 2(x-3)$$

$$(x-2)(x-3)$$

$$x-2=0 \quad x-3=0$$

$$x=2 \quad x=3$$

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**Solve the equation**

$$3x^2 + 7x + 2 = 0$$

$$(3x+1)(x+2) = 0$$

$3x+1=0$	$x+2=0$
$3x=-1$	$x=-2$
$x=-\frac{1}{3}$	

$$x^2 + 3x + 1 = 0$$

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**Solve the equation**

$$2x^2 + 9x - 5 = 0$$

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**3.3 x-intercepts and Quadratic Formula**

quadratic formula

another way to solve for x-intercepts

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

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Solve the equation

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

$$\begin{aligned} X &= \frac{6 \pm \sqrt{36 - 4 \cdot 1 \cdot 4}}{2} \\ &= \frac{6 \pm \sqrt{36 - 16}}{2} = \frac{6 \pm \sqrt{20}}{2} \\ &= \frac{6 \pm 2\sqrt{5}}{2} = \boxed{3 \pm \sqrt{5}} \end{aligned}$$

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