

## Grade 8

Distance Learning Module 4: Week of: April 20<sup>th</sup> – April 24th

### Mathematics – Grade 8 Algebra I - Modified from [Unit F - Beyond Straight Lines](#)

#### Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** Solve quadratic equations in one variable. Solve quadratic equations by inspection (e.g., for  $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as  $a \pm bi$  for real numbers  $a$  and  $b$ .

**Vocabulary:** Zero Product Property, Quadratic Formula, Discriminant, Vertex Form, Standard Form, Roots,  $x$  and  $y$  Intercepts

**Skills:** Students will: Use the Zero Product Property and Quadratic Formula to solve equations, find and use the discriminant to determine factorability and number of solutions.

#### Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Solving Quadratics by Factoring	<b>Instruction:</b> Solving Quadratics by Factoring Video Solving Quadratics by Factoring: Leading Coefficient not = 1 Video <b>Practice:</b> Quadratics by Factoring Intro Practice Quadratics by Factoring Practice	Teacher will check Khan Academy Practice
Tuesday: Solving Quadratics by Factoring	<b>Instruction:</b> Solving Quadratics Using Structure Video Quadratic Equation Word Problems: Triangle Dimensions Video Quadratic Equation Word Problems: Box Dimensions Video <b>Practice:</b>	Solve Equations Using Structure Practice (Khan Academy)

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	Solving Quadratics by Factoring Review Review Notes	
Wednesday: Quadratic Formula Intro	<b>Instruction:</b> The Quadratic Formula Video Worked Example: Quadratic Formula Video Worked Example: Quadratic Formula (Negative Coefficients) Video <b>Practice:</b> Understanding the Quadratic Formula Notes and Examples Solving Using the Quad Formula Practice	Quadratic Formula Practice (Khan Academy)
Thursday: Using the Quadratic Formula (Discriminant)	<b>Instruction:</b> Using the Quadratic Formula: # of Solutions Video Discriminant Review Notes, Examples <b>Practice:</b> Practice Kuta Worksheet (do just as many as you need to be confident) More Practice (optional)	Number of Solutions of Quadratic Equations Practice
Friday: Quadratic Formula/Factoring to Solve	<b>Instruction/Practice</b> Quadratic Formula Review Notes and Examples Solve using the Quadratic Formula Practice	Quadratic Formula and Factoring Quiz #3 (Khan Academy)

**Week criteria for success:**

- 1) I can solve a quadratic equation by factoring and using the zero product property.
- 2) I can solve a quadratic equation by using the quadratic formula.
- 3) I can use the discriminant to find the number of solutions a quadratic equation has.

**Supportive resources and tutorials for the week :**

Mr. Potter's smartboard notes pdf - PDF of classroom notes with examples, practice problems and answers  
 Mrs. Gwiazda's Google Slides