

Algebra 2

Quarter 2 Quadratic Equations

"It's not that I'm so smart, it's just that I stay with problems longer." –Albert Einstein

overview

In this unit, we will be exploring quadratic graphs and their properties. More specifically, we will focus on the vertex form of a quadratic function

guiding question 3: What are quadratic functions and how can we use them?

lessons

Monday 1/21 Tuesday 1/22	<p>Review what it means to solve a quadratic equation</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none"> • find the x-intercept. • identify how many solutions a quadratic equation has <p>Vocabulary: solution of a parabola,</p> <p>Practice Set:</p>
Thursday 1/24 Friday 1/25	<p>3.1 Solve Quadratic Equations by factoring</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none"> • solve quadratic equations by graphing • solve quadratic equations algebraically <p>Vocabulary: quadratic equation in one variable, root of an equation, zero of a function</p> <p>Practice Set:</p>
Monday 1/28 Tuesday 1/29	<p>3.2 Complex Numbers</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none"> • define and use the imaginary unit i • add, subtract and multiply complex numbers • find complex solutions and zeros <p>Vocabulary: imaginary unit i, complex number, imaginary number, pure imaginary number</p> <p>Practice Set: IXL T.4</p>
Wednesday 1/30 Thursday 1/31	<p>3.3 Completing the Square</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none"> • solve quadratic equations using square roots • solve quadratic equations by completing the square • write quadratic functions in vertex form <p>Vocabulary: completing the square</p> <p>Practice Set: 2.3 Practice A (evens)</p>
Monday 2/4 Tuesday 2/5	<p>Quiz 3.1-3.3</p> <p>3.4 Using the Quadratic Formula</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none"> • solve quadratic equations using the Quadratic Formula • analyze the discriminant to determine the number and type of solutions <p>Vocabulary: Quadratic Formula, discriminant</p> <p>Practice Set: 2.4 Practice A</p>

Thursday 2/7 Friday 2/8	3.5 Solving Non-linear Systems Objectives: Students will: <ul style="list-style-type: none">● solve systems of nonlinear equations● solve quadratic equations by graphing Vocabulary: systems of nonlinear equations Practice Set: 2.4 Practice A
Monday 2/11 Tuesday 2/12	3.6 Quadratic Inequalities Objectives: Students will: <ul style="list-style-type: none">● graph quadratic inequalities in two variables● solve quadratic inequalities in one variable Vocabulary: quadratic inequality in two variables, quadratic inequality in one variable Practice Set: 2.4 Practice A
Thursday 2/14 Friday 2/15	Vocab Due Today Assessment Unit 3

Assignment Guidelines:***Individual Work***

Vocabulary: (Create a Graphic Organizer, Mind Map, or Flash Cards for the vocab words of each section.)

- Due on the day of the Assessment

Practice Sets: You will find the problems in the textbooks located in the classroom **OR** in the pdf form on Google Classroom. You must complete the whole set and include a a reflection for full credit.

- Due the class after it is assigned
- Note: Late assignments are subject to 25% penalty. Assignments older than two weeks will not be accepted.

Warm Ups: Estimation180.com in class the first five minutes of class.

Group

Tasks: Due as set by deadline