

# Year at a Glance

Algebra 2/Algebra 2 Honors  
1200330/1200340

## 2021-2022 School Year



### Course Description:

Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

### Textbook Publisher:

[Big Ideas](#) (Students have online access through [My.SarasotaCountySchools.net](http://My.SarasotaCountySchools.net))

### Other Supplemental Resources:

[Math Nation](#)- (Students log in through [My.SarasotaCountySchools.net](http://My.SarasotaCountySchools.net))

[Khan Academy](#)

[FSA Portal](#)

### Standards:

Available on [CPalms](#)

[Algebra 2](#)

[Algebra 2 Honors](#)

Quarter	Major Concepts/Topics
Quarter 1	<p><b>Chapter 1: Linear Functions</b></p> <ul style="list-style-type: none"> <li>• Parent Functions and Transformation</li> <li>• Transformations of Linear and Absolute Functions</li> <li>• Modeling with Linear Systems</li> </ul>
	<p><b>Chapter 2: Quadratic Functions</b></p> <ul style="list-style-type: none"> <li>• Transformations of Quadratic Functions</li> <li>• Characteristics of Quadratic Functions</li> <li>• Focus of a Parabola</li> <li>• Modeling with Quadratic Functions</li> </ul>
	<p><b>Chapter 3: Quadratic Equations and Complex Numbers</b></p> <ul style="list-style-type: none"> <li>• Solving Quadratic Equations</li> <li>• Complex Numbers</li> <li>• Completing the Square</li> <li>• Using the Quadratic Formula</li> <li>• Solving Nonlinear Systems</li> <li>• Quadratic Inequalities</li> </ul>
Quarter 2	<p><b>Chapter 4: Polynomial Functions</b></p> <ul style="list-style-type: none"> <li>• Graphing Polynomial Functions</li> <li>• Adding, Subtracting and Multiplying Polynomials</li> <li>• Dividing Polynomials</li> <li>• Factoring Polynomials</li> <li>• Solving Polynomial Equations</li> <li>• The Fundamental Theorem of Algebra</li> <li>• Transformations of Polynomial Functions</li> <li>• Analyzing Graphs of Polynomial Functions</li> <li>• Modeling with Polynomial Functions</li> </ul>
	<p><b>Chapter 5: Rational Exponents and Radical Functions</b></p> <ul style="list-style-type: none"> <li>• <math>n</math>th Roots and Rational Exponents</li> <li>• Properties of Rational Exponents and Radicals</li> <li>• Graphing Radical Functions</li> <li>• Solving Radical Equations and Inequalities</li> <li>• Performing Function Operations</li> <li>• Inverse of a Function</li> </ul>
	<p><b>Chapter 6a: Exponential and Logarithmic Functions</b></p> <ul style="list-style-type: none"> <li>• Exponential Growth and Decay Functions</li> <li>• The Natural Base <math>e</math></li> <li>• Logarithms and Logarithmic Functions</li> <li>• Transformations of Exponential and Logarithmic Functions</li> </ul>

This guide represents a recommended sequence that can be used voluntarily by teachers. Dates may vary depending on individual classrooms. For specific questions regarding pacing please contact the individual teacher for clarification.

<b>Quarter 3</b>	<p><b>Chapter 6b: Exponential and Logarithmic Functions</b></p> <ul style="list-style-type: none"> <li>• Properties of Logarithms</li> <li>• Solving Exponential and Logarithmic Functions</li> <li>• Modeling with Exponential and Logarithmic Functions</li> </ul>
	<p><b>Chapter 7: Rational Functions</b></p> <ul style="list-style-type: none"> <li>• Inverse Variations</li> <li>• Graphing Rational Functions</li> <li>• Multiplying and Dividing Rational Functions</li> <li>• Adding and Subtracting Rational Expressions</li> <li>• Solving Rational Equations</li> </ul>
	<p><b>Quarter 8: Sequences and Series</b></p> <ul style="list-style-type: none"> <li>• Defining and Using Sequences and Series</li> <li>• Analyzing Arithmetic Sequences and Series</li> <li>• Analyzing Geometric Sequences and Series</li> <li>• Finding Sums of Infinite Geometric Series</li> <li>• Using Recursive Rules with Sequences</li> </ul>
<b>Quarter 4</b>	<p><b>Chapter 9: Trigonometric Ratios and Functions</b></p> <ul style="list-style-type: none"> <li>• Right Triangle and Trigonometry</li> <li>• Angles and Radian Measure</li> <li>• Trigonometric Functions of Any Angle</li> <li>• Graphing Sine and Cosine Functions</li> </ul>
	<p><b>Chapter 10: Probability</b></p> <ul style="list-style-type: none"> <li>• Sample Spaces and Probability</li> <li>• Independent and Dependent Events</li> <li>• Two-Way Tables and Probability</li> <li>• Probability of Disjoint and Overlapping Events</li> </ul>
	<p><b>Chapter 11: Data Analysis and Statistics</b></p> <ul style="list-style-type: none"> <li>• Using Normal Distributions</li> <li>• Population, Samples, and Hypotheses</li> <li>• Collecting Data</li> <li>• Experimental Design</li> <li>• Making Inferences from Sample Surveys</li> <li>• Making Inferences from Experiments</li> </ul>

### Graduation Requirements:

Students earning a standard high school diploma must four credits in math. Algebra 2 or Algebra 2 honors satisfies one of those credits. More information on graduation requirements and concordant scores can be found here: [Graduation Requirements for Florida's Statewide Assessments](#).