

# Algebra 1 Honors

## Algebra 1 Honors - Year at a Glance

Course # 1200320

This course is a high school course for one HS credit and includes an employability grade.

<u>A Note to Parents</u>: The Florida state standards require math teachers plan lessons that build knowledge of various mathematical concepts, develop the ability to apply these concepts, and engage students in critical thinking and discourse. All standards in the state course description are designed to be learned by the end of the course.

Please note the units of study listed below indicate the course sequence. Instructional pacing may vary. Specific questions regarding when content will be addressed in a specific course are best answered by the individual teacher.

**Graduation Requirements:** Students earning a standard high school diploma must earn at least one math credit in Algebra 1 or an equivalent course. The student must also pass the FSA Algebra 1 End of Course Exam (EOC) or earn a concordant score. More information on graduation requirements and concordant scores can be found here: Graduation Requirements for Florida's Statewide Assessments.

#### **Course Description**

In Algebra 1 Honors, instructional time will emphasize five areas: (1) performing operations with polynomials and radicals, and extending the Laws of Exponents to include rational exponents; (2) extending understanding of functions to linear, quadratic and exponential functions and using them to model and analyze real-world relationships; (3) solving quadratic equations in one variable and systems of linear equations and inequalities in two variables; (4) building functions, identifying their key features and representing them in various ways and (5) representing and interpreting categorical and numerical data with one and two variables.

All clarifications stated, whether general or specific to Algebra I Honors, are expectations for instruction of that benchmark.

Curricular content for all subjects must integrate critical-thinking, problem-solving, and workforce-literacy skills; communication, reading, and writing skills; mathematics skills; collaboration skills; contextual and applied-learning skills; technology-literacy skills; information and media-literacy skills; and civic-engagement skills.

Honors and Advanced Level Course Note: Accelerated courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines. Academic rigor is more than simply assigning to students a greater quantity of work. *Honors topics are listed in bold and italicized*.

**IB MYP Notes**: The International Baccalaureate® aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. The MYP curriculum framework comprises eight subject groups, providing a broad and balanced education for early adolescents. The MYP requires at least 50 hours of teaching time for each subject group, in each year of the program. The MYP is inclusive by design; students of all interests and academic abilities can benefit from their participation.

### **CPALMS Link**

Please follow the link below to learn more about the course expectations, the course standards, and to access student resources. The student resources include Florida Department of Education recommended resources that students can use to learn the concepts and skills in this course. When arriving at the page, verify you are in the "2022 – And Beyond (current)".

Honors Algebra 1: <a href="https://www.cpalms.org/PreviewCourse/Preview/13011">https://www.cpalms.org/PreviewCourse/Preview/13011</a>

	Module of Study	Module Sequence
Quarter 1 Aug 10 – Oct 12 45 Days	Module 1: Writing and Solving Equations	<ul> <li>Writing and interpreting equations</li> <li>Solving multi-step equations</li> <li>Solving equations with the variable on each side</li> </ul>
		<ul> <li>Solving equations using absolute value</li> <li>Solving proportions</li> <li>Rewriting/rearraigning equations and formulas</li> </ul>
	Module 5: Linear Inequalities	<ul> <li>Solving one-step inequalities</li> <li>Solving multi-step inequalities</li> <li>Solving compound inequalities</li> <li>HONORS: Solving absolute value inequalities</li> <li>Graphing inequalities in two variables</li> </ul>
	Module 2: Graphs and Functions	<ul> <li>Functions</li> <li>Linearity and continuity of graphs</li> <li>Intercepts of graphs</li> <li>Shapes of graphs</li> <li>Sketching graphs and comparing functions</li> </ul>
Quarter 2 Oct 13 – Dec 21 46 days	Module 3: Linear and Absolute Value Functions	<ul> <li>Graphing linear functions</li> <li>Rate of change and slope</li> <li>Slope-intercept form</li> <li>Transformations of linear equations</li> <li>HONORS: Equations of transformations of linear functions Simple Interest</li> <li>Absolute value functions</li> <li>HONORS: Equations of transformations of absolute value functions</li> </ul>
	Module 4: Equations of Linear Functions	<ul> <li>Writing equations in slope-intercept form</li> <li>Writing equations in standard and point-slope forms</li> <li>Scatterplots and lines of best fit</li> <li>Correlation and causations</li> <li>Linear regression</li> <li>HONORS: Plotting and analyzing residuals</li> </ul>
	Module 6: Systems of Linear Equations and Inequalities	<ul> <li>Solving systems of equations by graphing</li> <li>Substitution</li> <li>Elimination using addition</li> <li>Elimination using multiplication</li> <li>Systems of inequalities</li> </ul>
Quarter 3 Jan 8 – Mar 7 42 Days	Module 7: Exponents and Roots	<ul> <li>Multiplication properties of exponents</li> <li>Division properties of exponents</li> <li>Negative exponents</li> <li>Rational exponents</li> <li>Simplifying radical expressions</li> <li>Operations with radical expressions</li> </ul>

	Module 8:	Exponential functions
	Exponential Functions	Interpreting graphs of exponential functions
		Writing exponential functions
		Compound interest
		Transforming exponential expressions
	Module 9:	Adding and subtracting polynomials
	Polynomials	Multiplying polynomials by monomials
	,	Multiplying polynomials
		Special products
		Using the distributive property
		Factoring quadratic trinomials
		Factoring special products
		Dividing polynomials
Quarter 4	Module 10:	Graphing quadratic functions
Mar 18 – May 24	Quadratic Functions	Transformations of quadratic functions
44 Days		HONORS: Equations of transformations of quadratic
		functions
		Solving quadratic equations by graphing
		Solving quadratic equations by factoring
		Solving quadratic equations by completing the square
		Solving quadratic equations by using the quadratic
		formula
		Modeling and curve fitting
		HONORS: Combining functions
	Module 11:	Univariate data
	Represent and Interpret Data	Two-Way frequency tables
	land the process and the process and	HONORS: Summarizing categorical bivariate data
		Bivariate data
		Distributions of data
		Comparing sets of data

#### **Course Resources**

#### **Core Textbook:**

Florida Reveal Math - Students have online access through My.SarasotaCountySchools.net

#### F.A.S.T. Assessment Information:

https://flfast.org/

https://flfast.org/-/media/project/client-portals/florida-fast/pdf/fast-facts.pdf

#### **Supplemental Resources:**

 $i\hbox{-Ready - Students log in through}\ \underline{\hbox{My.SarasotaCountySchools.} \underline{\hbox{net}}$ 

ALEKS – Students log in through My.SarasotaCountySchools.net

Nearpod - Students log in through My.SarasotaCountySchools.net

Khan Academy

For additional supplemental resources, please see your child's course syllabus.