



7th Grade Advanced Math

Course 2 Advanced Mathematics - Year at a Glance

Course # 1205050, 1205055

A Note to Parents: 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.

Course Description

In this Grade 7 Advanced Mathematics course, instructional time should focus on five critical areas: (1) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; (2) drawing inferences about populations based on samples; (3) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (4) grasping the concept of a function and using functions to describe quantitative relationships; and (5) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Advanced 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.

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.

<https://www.cpalms.org/PreviewCourse/Preview/10286>

	Unit of Study	Unit Sequence
Quarter 1 Aug 10 – Oct 12	Unit 1: The Number System	<ul style="list-style-type: none"> • Integers & Absolute Value • Adding Integers • Subtracting Integers • Multiplying Integers • Dividing Integers • Rational Numbers • Adding Rational Numbers • Subtracting Rational Numbers • Multiplying Rational Numbers • Dividing Rational Numbers
	Unit 2: Expressions and Equations	<ul style="list-style-type: none"> • Algebraic Expressions • Adding & Subtracting Linear Expressions • Solving Equations Using Addition & Subtraction • Solving Equations Using Multiplication & Division • Solving Two-Step Equations
	Unit 3: Inequalities	<ul style="list-style-type: none"> • Writing and Graphing Inequalities • Solving Inequalities Using Addition or Subtraction • Solving Inequalities Using Multiplication or Division • Solving Two-Step Inequalities
	Unit 4: Expressions and Equations	<ul style="list-style-type: none"> • Solving Simple Equations • Solving Multi-step Equations • Solve equations with variables on both sides • Rewriting equations and formulas
Quarter 2 Oct 13 – Dec 22	Unit 5: Ratios and Proportions	<ul style="list-style-type: none"> • Ratios and Rates • Proportions • Writing Proportions • Solving Proportions • Scale Drawings • Slope • Conversion of units across different measurement systems
	Unit 6: Linear Equations	<ul style="list-style-type: none"> • Graphing Linear Equations • Slope of a Line • Graphing a Proportional Relationship • Graphing Linear Equations in Slope-Intercept Form • Graphing in Standard Form • Writing an Equation in Slope-Intercept form
	Unit 7: Functions	<ul style="list-style-type: none"> • Relations and Functions • Representation of Functions • Linear vs Non-Linear Functions • Analyze and Sketching Graphs
	Unit 8: Percent	<ul style="list-style-type: none"> • Percent & Decimals • Comparing & Ordering: Fractions, Decimals & Percent • The Percent Proportion • Percent of Increase & Decrease • Discounts & Mark-up • Simple Interest

Quarter 3 Jan 11 – Mar 11	Unit 9: Probability and Statistics	<ul style="list-style-type: none"> • Outcomes & Events • Probability • Experimental & Theoretical Probability • Compound Events • Independent & Dependent Events • Samples & Populations • Comparing Populations • Stem and Leaf Plots • Circle Graphs
	Unit 10: 2-D Geometry	<ul style="list-style-type: none"> • Adjacent & Vertical Angles • Complimentary and Supplementary Angles • Triangles • Quadrilaterals • Circles & Circumference • Area of Circles • Ratio of Circumference to Diameter as related to Pi • Perimeters of Composite Figures • Areas of Composite Figures
Quarter 4 Mar 22 – May 27	Unit 11: 3-D Geometry	<ul style="list-style-type: none"> • Surface Area of Prisms • Surface Area of Pyramids • Surface Area of Cylinders • Cross-Sections • Volume of Prisms • Volume of Pyramids • Volume of Cylinders

Course Resources

Core Textbook:

Big Ideas - Students have online access through My.SarasotaCountySchools.net

Supplemental Resources:

i-Ready - Students log in through My.SarasotaCountySchools.net

[Khan Academy](#)

[FSA Portal](#)

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