Pre-Algebra (8th Grade)

8th Grade Pre-Algebra - Year at a Glance

Course # 1205070, 1205100 (IB)

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 grade 8, instructional time will emphasize six areas: (1) representing numbers in scientific notation and extending the set of numbers to the system of real numbers, which includes irrational numbers; (2) generate equivalent numeric and algebraic expressions including using the Laws of Exponents; (3) creating and reasoning about linear relationships including modeling an association in bivariate data with a linear equation; (4) solving linear equations, inequalities and systems of linear equations; (5) developing an understanding of the concept of a function and (6) analyzing two-dimensional figures, particularly triangles, using distance, angle and applying the Pythagorean Theorem.

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.

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. After clicking the link, please make sure you are in the "2022 and Beyond" tab on the website. This will ensure you are looking at our new B.E.S.T. Standards.

Pre-Algebra: https://www.cpalms.org/PreviewCourse/Preview/10287
Pre-Algebra International Baccalaureate (IB: MYP Pre-Algebra): https://www.cpalms.org/PreviewCourse/Preview/2935

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	Unit of Study	Unit Sequence
Quarter 1 Aug 10 – Oct 12 *45 Days*	Module 1: Exponents and Scientific Notation	• Rational numbers • Products and quotients of powers • Power of powers • Negative exponents • Multiply and divide monomials • Multiply linear expressions • Factor algebraic expressions • Power of a monomial • Scientific notation • Compute with Scientific notation
	Module 2: Real Numbers	• Roots • Solve equations involving roots • Real numbers • Estimate irrational numbers • Compare and order real numbers
Quarter 2 Oct 13 – Dec 21 *46 Days*	Module 3: Multi-Step Equations and Inequalities	• Solve equations with variables on each side • Write and solve equations with variables on each side • Solving Multi-step Equations • Write and solve multi-step equations • Determine number of solutions • Solve two-step inequalities • Write and solve two-step inequalities
	Module 4: Linear Relationships and Slope	• Linear Relationships • Slope of a line • Similar triangles and slope • Proportional relationships • Slope-intercept form • Graph linear equations • Interpret linear relationships
Quarter 3 Jan 8 – Mar 7 *42 Days*	Module 5: Functions	• Relations and Functions • Function tables • Determine Linear and Non-Linear Functions • Analyze Graphs of functions
	Module 6: Systems of Linear Equations	• Systems of Equations • Solve systems of equations • Determine number of solutions • Non-integer solutions • Use systems of equations to solve problems
	Module 7: Angles, Triangles, and the Pythagorean Theorem	• Adjacent & Vertical Angles • Complimentary and Supplementary Angles • Angle relationships and triangles • Angle relationships and polygons • Pythagorean Theorem • Converse of the Pythagorean Theorem • Triangle inequality theorem

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		• Distance on the coordinate plane
Quarter 4 Mar 18 – May 24 *44 Days*	Module 8: Transformations, Congruence, and Similarity	• Translations • Reflections • Rotations • Congruence and transformations • Dilations • Similarity and transformations • Indirect measurement
	Module 9: Bivariate Data	• Construct scatter plots • Scatter plots and line graphs • Draw lines of fit • Equations for lines of fit
	Module 10: Probability	• Repeated Experiments • Theoretical Probability of repeated experiments • Relative frequency of repeated experiments • Make predictions

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