Cobb County School District

Advanced Algebra Teaching & Learning Framework

Semester 1			Semester 2				
Unit 1 6 weeks	**Unit 2** 7 weeks	**Unit 3** 5 weeks	**Unit 4** 6 weeks	**Unit 5** 3 weeks	**Unit 6** 4 weeks	**Unit 7** 3 weeks	**Unit 8** 2 weeks
Descriptive and Inferential Statistics **AA.DSR.2**	**Exponential and Logarithmic Functions** **AA.FGR.3**	**Radical Functions** **AA.FGR.4**	**Modeling Polynomial Functions** **AA.FGR.5**	**Investigating Linear Algebra and Matrices** **AA.PAR.6**	**Trigonometry and the Unit Circle** **AA.GSR.7**	**Rational Functions** **AA.FGR.8**	**Culminating Capstone Unit**
AA.DSR.2.1 (Randomization) **AA.DSR.2.2** (Evaluate ethics, privacy, bias, and variables) **AA.DSR.2.3** (Distributions and inferences from a random sample) **AA.DSR.2.4** (Calculate and interpret z-scores) **AA.DSR.2.5** (Empirical and z-scores) **AA.DSR.2.6** (Using population simulations) **AA.DSR.2.7** (Confidence intervals and reliability) **AA.DSR.2.8** (Summarize and evaluate reports based on data)	**AA.FGR.3.1** (Find the inverses of functions) **AA.FGR.3.2** (Analyze, graph, and compare functions) **AA.FGR.3.3** (Solve problems in context) **AA.FGR.3.4** (Create exponential equations and use logarithmic to solve) **AA.FGR.3.5** (Create and interpret logarithmic equations in one variable) **AA.FGR.3.6** (Create, interpret, and solve exponential equations) **AA.FGR.3.7** (Create, interpret, and solve logarithmic equations with 2 variables)	**AA.FGR.4.1** (Expressions with radicals and rational exponents) **AA.FGR.4.2** (Solve simple radical equations) **AA.FGR.4.3** (Analyze and graph radical functions) **AA.FGR.4.4** (Create and solve radical equations with one variable) **AA.FGR.4.5** (Create and solve radical equations with 2 or more variables)	**AA.FGR.5.1** (Quadratic regressions) **AA.FGR.5.2** (Complex numbers and conjugates) **AA.FGR.5.3** (Complex numbers and properties) **AA.FGR.5.4** (Factor quadratics) **AA.FGR.5.5** (Solve quadratic equations and inequalities) **AA.FGR.5.6** (Solving quadratic & linear systems) **AA.FGR.5.7** (Create & analyze quadratic equations) **AA.FGR.5.8** (Fundamental Theorem of Algebra) **AA.FGR.5.9** (Graphing with zeros) **AA.FGR.5.10** (Factoring polynomials) **AA.FGR.5.11** (Writing polynomial equations in standard form)	**AA.PAR.6.1** (Matrices operations) **AA.PAR.6.2** (Systems and matrices) **AA.PAR.6.3** (Inverse of a matrix) **AA.PAR.6.4** (Linear programming)	**AA.GSR.7.1** (Trig ratios x, y, and r using the unit circle) **AA.GSR.7.2** (Apply angle measures and coordinates of the unit circle)	**AA.FGR.8.1** (Equivalent rational expressions) **AA.FGR.8.2** (Operations of rational expressions) **AA.FGR.8.3** (Graph rational functions) **AA.FGR.8.4** (Create and solve rational equations)	**All standards.**

Units contain tasks that depend upon the concepts addressed in earlier units. Mathematical standards are interwoven and should be addressed throughout the year in as many different units and tasks as possible in order to stress the natural connections that exist among mathematical topics.

The Framework for Statistical Reasoning, Mathematical Modeling Framework, and the K-12 Mathematical Practices should be taught throughout the units.

Key for Course Standards: DSR: Data & Statistical Reasoning, FGR: Functional & Graphical Reasoning, PAR: Patterning & Algebraic Reasoning, GSR: Geometric & Spatial Reasoning

Updated May 2025

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Unit 1 3 weeks	Unit 2 3.5 weeks	Unit 3 2.5 weeks	Unit 4 3 weeks	Unit 5 1.5 weeks	Unit 6 2 weeks	Unit 7 1.5 weeks	Unit 8 1 week
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