



**Georgia's K-12
Mathematics Standards
Curriculum Map**

2026 – 2027

Advanced Mathematical Decision Making

FCS AMDM CURRICULUM MAP

Georgia's AMDM Mathematics Standards						
Semester 1			Semester 2			
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Using the Power of Mathematical Reasoning to Make Decisions	Using Probability to Make Decisions	Using Statistical Studies to Make Decisions	Using Mathematical Models to Make Decisions	Using Vectors and Matrices to Make Decisions	Using Network Models to Make Decisions	Culminating Capstone Unit
27 Days	27 Days	29 Days	26 Days	26 Days	25 Days	10 Days
<u>Unit Dates</u> 8/5/2026 – 9/11/2026	<u>Unit Dates</u> 9/14/2026 – 10/28/2026	<u>Unit Dates</u> 10/29/2026 - 12/16/2026	<u>Unit Dates</u> 1/5/2027 – 2/10/2027	<u>Unit Dates</u> 2/11/2027 – 3/26/2027	<u>Unit Dates</u> 3/29/2027 – 5/7/2027	<u>Unit Dates</u> 5/10/2027 - 5/21/2027
Learning Expectations AMDM.QPR.2.1 AMDM.QPR.2.2 AMDM.QPR.2.3 AMDM.QPR.3.1 AMDM.QPR.3.2 AMDM.PAR.4.1 AMDM.PAR.4.2 AMDM.PAR.4.3 AMDM.PAR.4.4	Learning Expectations AMDM.PR.5.1 AMDM.PR.5.2 AMDM.PR.6.1 AMDM.PR.6.2 AMDM.PR.6.3	Learning Expectations AMDM.DSR.7.1 AMDM.DSR.7.2 AMDM.DSR.7.3 AMDM.DSR.7.4 AMDM.DSR.7.5 AMDM.DSR.7.6 AMDM.DSR.7.7 AMDM.DSR.7.8 AMDM.DSR.7.9	Learning Expectations AMDM.PAR.8.1 AMDM.PAR.8.2 AMDM.FGR.9.1 AMDM.FGR.9.2 AMDM.GSR.10.1 AMDM.GSR.10.2	Learning Expectations AMDM.PAR.11.1 AMDM.PAR.11.2	Learning Expectations AMDM.PAR.12.1 AMDM.PAR.12.2 AMDM.PAR.12.3 AMDM.PAR.12.4	Learning Expectations All Standards
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The [Framework for Statistical Reasoning](#), [Mathematical Modeling Framework](#), and the [K-12 Mathematical Practices](#) should be taught throughout the units.

Unit 1: Using the Power of Mathematical Reasoning to Make Decisions

27 Days

Unit Dates: 8/5/2026 – 9/11/2026

AMDM.QPR.2: Make decisions and solve problems using ratios, rates, and percents in a variety of real-world applications.

AMDM.QPR.3: Make predictions by analyzing averages and indices of large data sets through investigations of real-world contexts.

AMDM.PAR.4: Develop methods or algorithms to analyze discrete situations.

AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Learning Objectives		Evidence of Student Learning	
AMDM.QPR.2.1	Apply proportions, ratios, rates, and percentages to various settings, including business, media, and consumerism.	Examples Aspect ratios – TV, films, and special effects	
AMDM.QPR.2.2	Solve problems involving ratios in mechanical and agricultural contexts.	Example Determine the effect of tire size on speedometer.	
AMDM.QP2.2.3	Use proportions to solve problems involving large quantities that are not easily measured.	Examples - Estimate the size of a crowd at indoor and outdoor events. - Estimate the number of gumballs in a container. - Determine license plate number options.	
AMDM.QPR.3.1	Use averages and weighted averages to make decisions.	Examples - Batting averages - Slugging percentage - Class grades.	
AMDM.QPR.3.2	Calculate and interpret indices.	Example Fan cost index	Terminology The fan cost index determines the cost to take a family to an event.
AMDM.PAR.4.1	Create and verify identification numbers.	Examples - UPC codes - QR codes - Product keys - Credit card number	

AMDM.PAR.4.2	Analyze and evaluate the mathematics behind various methods of voting and selection.	Examples • Rank voting • Plurality • Borda count • Pairwise comparisons
AMDM.PAR.4.3	Evaluate various voting and selection processes to determine an appropriate method for a given situation.	
AMDM.PAR.4.4	Apply various ranking algorithms to determine an appropriate method for a given situation.	Examples • Inheritance • Sports drafts • Sports pools

Unit 2: Using Probability to Make Decisions

27 Days

Unit Dates: 9/14/2026 – 10/28/2026

AMDM.PR.5: Analyze the chances for success or failure in order to make decisions.

AMDM.PR.6: Model strategic interaction among rational decision-makers.

AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Learning Objectives		Evidence of Student Learning	
AMDM.PR.5.1	Determine conditional probabilities and probabilities of compound events to make decisions in problem situations.	Examples • Clothing combinations • Food combinations • Travel routes	
AMDM.PR.5.2	Use probabilities to make and justify decisions about risks in everyday life.	Examples • Insurance policies • Gambling	
AMDM.PR.6.1	Calculate expected value to analyze mathematical fairness, payoff, and risk.	Examples • The purchase of a lottery ticket • Amount of insurance needed • Replacement value	
AMDM.PR.6.2	Analyze real-life situations involving strategic interactions using the mathematics of zero-sum games.	Terminology • A zero-sum game is a mathematical representation of a situation in which each participant's gain or loss of utility is exactly balanced by the losses or gains of the utility of the other participants.	Examples • Viruses • Zombies • Prisoner's Dilemma
AMDM.PR.6.3	Construct a mathematical model of probabilistic situations to make mathematical assumptions.	Example • Students could create their own carnival game of chance.	

Unit 3: Using Statistical Studies to Make Decisions

29 Days

Unit Dates: 10/29/2026 – 12/16/2026

AMDM.DSR.7: Conduct investigative research to solve real-life problems and answer statistical investigative questions involved in business and financial decision-making.

AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Learning Objectives		Evidence of Student Learning	
AMDM.DSR.7.1	Apply statistical methods to design, conduct, and analyze statistical studies. Identify a contextual, real-life problem that can be answered using investigative research.	Strategies and Methods • Simple random sampling • Stratified random sampling • Cluster sampling • Convenience sampling	
AMDM.DSR.7.2	Build the skills and vocabulary necessary to analyze and critique reported statistical information, summaries, and graphical displays. Develop statistical investigative questions that can help solve a real-life problem involved in business and financial decision-making.	Strategies and Methods • Interpret and compare results of polls given margin of error. • Determine possible sources of statistical bias. • Determine appropriate sampling techniques. • Determine sources of variability of data, those that can and cannot be controlled. Examples • Trends – gas prices, birth rates, death rates, stock market - Financial portfolios, mutual funds, life insurance	
AMDM.DSR.7.3	Create a statistical study using sound methodology to answer statistical investigative questions and to solve the real-life problem.	Fundamentals • Students should have experiences with both experimental and observational studies.	Terminology • Sound methodology ensures the integrity, credibility, and generalizability of the evidence, analysis, and conclusions presented in a study based on the techniques and approaches used.

AMDM.DSR.7.4	Explain how the sample size impacts the precision with which estimates of the population parameters can be made (i.e., the larger the sample size the more precision).	
AMDM.DSR.7.5	Recognize that random selection from a population plays a different role than random assignment in an experiment.	
AMDM.DSR.7.6	Incorporate random designs in data collection.	
AMDM.DSR.7.7	Describe ways in which big data can be used to make decisions in various business enterprises and in the context of business and financial decision-making.	Examples • How much house can you afford? • Loan application process • Credit worthiness • Investment potential
AMDM.DSR.7.8	Use distributions to identify the key features of the data collected.	
AMDM.DSR.7.9	Interpret results and make connections to the original research question.	Strategies and Methods • Analyze and report using histograms, boxplots, pie charts, and bar graphs

Semester 2

Unit 4: Using Mathematical Models to Make Decisions

26 Days

Unit Dates: 1/5/2027 – 2/10/2027

AMDM.PAR.8: Create and analyze mathematical models to make decisions related to earning, investing, spending, and borrowing money.

AMDM.FGR.9: Use functions to model problem situations in both discrete and continuous relationships.

AMDM.GSR.10: Use functions to model problem situations in both discrete and continuous relationships.

AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Learning Objectives		Evidence of Student Learning	
AMDM.PAR.8.1	Use exponential functions to model change in a variety of financial situations.	Examples • Simple interest • Compound interest • Compound continuous	
AMDM.PAR.8.2	Determine, represent, and analyze mathematical models for income, expenditures, and various types of loans and investments.	Terminology • Time value of money, budget, growth potential, wealth building, debt snowfall	
AMDM.FGR.9.1	Determine whether a problem situation involving two quantities is best modeled by a discrete or continuous relationship.	Examples • Pattern identification (discrete) • Population growth (discrete) • Compound interest (discrete) • Medication dosage (continuous) • Climate change (continuous) • Bone decay (continuous)	
AMDM.FGR.9.2	Use linear, exponential, logistic, and piecewise functions to construct a model.		
AMDM.GSR.10.1	Create and use two-dimensional and three-dimensional representations to model authentic situations.	Example Roofing and construction	
AMDM.GSR.10.2	Solve problems involving inaccessible distances using basic trigonometric principles including extensions of right triangle trigonometry.	Example Cell phone triangulation	Strategies and Methods Law of Sines, Law of Cosines, Unit Circle

Unit 5: Using Vectors and Matrices to Make Decisions

26 Days

Unit Dates: 2/11/2027 – 3/26/2027

***AMDM.PAR.11: Use functions to model problem situations in both discrete and continuous relationships.
AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.***

Learning Objectives

Evidence of Student Learning

AMDM.PAR.11.1 Represent situations and solve problems using vectors in areas such as transportation, computer graphics, and the physics of force and motion.

Examples

- Transportation
- Computer Graphics
- Physics of force and motion

AMDM.PAR.11.2 Represent geometric transformations and solve problems using matrices.

Examples

- Computer animations
- Food chains

Unit 6: Using Network Models to Make Decisions

25 Days

Unit Dates: 3/29/2027 – 5/7/2027

AMDM.PAR.12: Make informed decisions and solve problems with a variety of network models in quantitative situations.

AMDM.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.

Learning Objectives

Evidence of Student Learning

AMDM.PAR.12.1 Solve problems represented by a vertex-edge graphs.

Examples

- Critical and Euler paths
- Minimal spanning trees

AMDM.PAR.12.2 Construct, analyze, and interpret flow charts to develop an algorithm to describe processes such as quality control procedures.

Examples

- Manufacturing
- Restaurants

AMDM.PAR.12.3 Investigate the scheduling of projects using Program Evaluation Review Technique (PERT).

Terminology

- PERT is a project management planning tool used to calculate the amount of time it will take to realistically finish a project. PERT stands for Program Evaluation Review Technique.

Strategies and Methods

- Students should be able to use PERT charts as tools to plan tasks within a project - making it easier to schedule and coordinate team members accomplishing the work.

AMDM.PAR.12.4 Consider problems that can be resolved by coloring graphs.

Unit 7: Culminating Capstone Unit

10 Days

Unit Dates: 5/10/2027 - 5/21/2027

ALL Standards Addressed in this Unit

The capstone unit applies content that has already been learned in previous interdisciplinary PBLs and units throughout the school year. The capstone unit is an interdisciplinary unit that allows students to create a presentation, report, or demonstration that could include their models used to answer an overarching driving question. (e.g., Students can present their solution(s), findings, project, or answer the driving question to a larger audience during the culminating capstone unit.)

