Advanced Mathematical Decision Making Standards
Overview for Parents

Standard	Description of the Georgia Performance Standard
Gradebook Code	**Number and Operations**
MAMDMN1a	Use proportional reasoning to solve problems involving ratios by applying them to various settings to include business, media and consumerism
MAMDMN1b	Understand and use averages, weighted averages, and indices by applying them to various settings to include business, media and consumerism
MAMDMN1c	Solve problems involving large quantities that are not easily measured by applying them to various settings to include business, media and consumerism
MAMDMN1d	Understand how identification numbers, such as UPC's, are created and verified
	Algebra
MAMDMA1a	Represent situations and solve problems using vectors in areas such as transportation, computer graphics, and the physics of force and motion
MAMDMA1b	Represent geometric transformations and solve problems using matrices in fields such as computer animation
MAMDMA2a	Solve problems represented by a vertex-edge graph and find critical paths, Euler paths and minimal spanning trees
MAMDMA2b	Construct, analyze and interpret flow charts to develop an algorithm to describe processes such as quality control procedures
MAMDMA2c	Investigate the scheduling of project using PERT
MAMDMA2d	Consider problems that can be resolved by coloring graphs
MAMDMA3a	Use exponential functions to model change in a variety of financial situations and make decisions related to earning, investing, spending and borrowing money
MAMDMA3b	Determine, represent and analyze mathematical models for income, expenditures and various types of loans and investments and make decisions related to earning, investing, spending and borrowing money
MAMDMA4a	Evaluate various voting and selection processes to determine and appropriate method for a given situation
MAMDMA4b	Apply various ranking algorithms to determine and appropriate method for a given situation
	Geometry
MAMDMG1	Create and use two- and three-dimensional representations of authentic situations
MAMDMG2	Solve geometric problems involving inaccessible distances using basic trigonometric principles, including Law of Sines and Law of Cosines
	Data Analysis
MAMDMD1a	Determine conditional probabilities and probabilities of compound events to make decisions in problem situations
MAMDMD1b	Use probabilities to make and justify decisions about risks in everyday life
MAMDMD1c	Calculate expected value to analyze mathematical fairness, payoff and risk
MAMDMD2	Build the skills and vocabulary necessary to analyze and critique reported statistical information, summaries and graphical displays
MAMDMD3	Apply statistical methods to design, conduct and analyze statistical studies

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MAMDMD4a	Determine whether a problem situation involving two quantities is best modeled by a discrete (pattern identification, population growth, compound interest) or continuous (medication dosage, climate change, bone decay) relationship
MAMDMD4b	Use linear, exponential, logistic, piecewise and sine functions to construct a model