

Georgia Mathematics I

Textbook/ Software

		Chapter / Section #	Chapter / Section Title
Unit 1 : Relations and Functions 1-1 : Recognizing Non-Numeric Functions 1-2 : Recognizing Numeric Functions 1-3 : Recognizing Graphs of Functions 1-4 : Classifying Relations and Functions Unit 2 : Graphs of Functions 2-1 : Identifying Key Characteristics of Graphs of Functions Unit 3 : Linear Function Operations and Composition 3-1 : Evaluating Linear Functions 3-2 : Adding and Subtracting Linear Functions 3-3 : Modeling with Linear Function Composition 3-4 : Composing Linear Functions	UNIT 01: FUNCTION FAMILIES	1	Relations and Functions
		1.1	Multiple Representations of Relations and Functions
		1.2	Linear and Absolute Value Functions
		1.3	Every Graph Tells a Story
		1.4	Cubic and Indirect Variation Functions
		1.5	Square Root and Exponential Functions
		2	Algebraic Functions
		2.1	Functional Notation
		2.2	Introduction to Sequences
		2.3	Arithmetic and Geometric Sequences
		2.4	Domain and Range of Algebraic Functions
		2.5	Extrema & Symmetry
		2.6	Rates of Change of Functions
		3	Logic
		3.1	Two Methods of Logical Reasoning
		3.2	Hypotheses, Conclusions, Conditional Statements, Counter-examples, Direct and Indirect Arguments
		3.3	Converses, Inverses, Contapositives, Biconditionals, Truth Tables, Postulates, and Theorems
3.4	Introduction to Direct and Indirect Proof with the Properties of Numbers		

<p>Unit 4 : Linear Models and Four Quadrant Graphs 4-1 : Graphing with Positive Integer Rates of Change 4-2 : Graphing with Positive Fractional Rates of Change 4-3 : Graphing with Negative Rates of Change</p> <p>Unit 5 : Linear Models and Slope-Intercept Graphs A 5-1 : Graphing given an Integer Slope and Y-intercept 5-2 : Graphing given a Fractional Slope and Y-intercept</p> <p>Unit 6 : Quadratic Models in Factored Form 6-1 : Modeling Area as Product of Monomial and Binomial 6-2 : Modeling Area as Product of Two Binomials 6-3 : Maximizing Area</p> <p>Unit 7 : Exponential Modeling 7-1 : Modeling Equations with a Starting Point of One 7-2 : Modeling Equations with a Starting Point other than One 7-3 : Using Regression Models</p> <p>Unit 8 : Cubic Models 8-1 : Modeling Volume of Cylinders 8-2 : Modeling Volume of Closed Prisms 8-3 : Modeling Volume of Open Prisms 8-4 : Using Given Cubic Models</p> <p>Unit 9 : Rational Models as Ratios 9-1 : Modeling Ratios as Rational Functions</p> <p>Unit 10 : Polynomial Operations 10-1 : Adding Polynomials 10-2 : Adding Polynomials with Higher Orders 10-3 : Subtracting Polynomials 10-4 : Setting up a Factor Table 10-5 : Multiplying Polynomials using a Factor Table</p>	UNIT 02: ALGEBRA INVESTIGATIONS	4	Modeling with Functions
		4.1	Using Patterns to Generate Algebraic Functions
		4.2	Using Multiple Representations of Algebraic Functions
		4.3	Operations with Polynomials
		4.4	Dividing and Factoring Quadratic Trinomials
		4.5	Factoring Quadratic Trinomials
		4.6	Operations with Square Roots
		4.7	Adding, Subtracting, Dividing, and Rationalizing Radicals
		4.8	Modeling with Functions
		4.9	More Modeling with Functions

<p>Unit 11 : Introduction to Quadratic Expression Factoring 11-1 : Factoring Trinomials with Positive Constants and Coefficients of One 11-2 : Factoring Trinomials with Negative Constants and Coefficients of One</p> <p>Unit 12 : Introduction to Simplification and Operations with Radicals 12-1 : Simplifying Radicals 12-2 : Adding and Subtracting Radicals 12-3 : Multiplying Radicals 12-4 : Dividing Radicals</p>			
<p>Unit 13 : Angles and Angle Pairs 13-1 : Measuring Angles 13-2 : Classifying Angles 13-3 : Classifying Angle Pairs 13-4 : Measuring Angles in a Triangle</p> <p>Unit 14 : Triangle Classification 14-1 : Classifying Triangles</p> <p>Unit 15 : Angle Relationships in a Triangle 15-1 : Finding Measures of Angles in Triangles</p> <p>Unit 16 : Polygon Classification 16-1 : Classifying Quadrilaterals 16-2 : Classifying Polygons</p> <p>Unit 17 : Properties of Quadrilaterals and Parallelograms 17-1 : Finding Parts of Quadrilaterals and Parallelograms</p> <p>Unit 18 : Properties of Trapezoids and Rectangles 18-1 : Finding Parts of Rectangles 18-2 : Finding Parts of Trapezoids</p> <p>Unit 19 : Properties of Rhombi</p>	UNIT 03: GEOMETRY GALLERY	<p>5</p> <p>5.1</p> <p>5.2</p> <p>5.3</p> <p>5.4</p> <p>5.5</p> <p>5.6</p> <p>5.7</p> <p>6</p> <p>6.1</p> <p>6.2</p> <p>6.3</p> <p>6.4</p> <p>6.5</p> <p>6.6</p>	<p>Properties of Triangles</p> <p>Angle Relationships in Triangles</p> <p>Side Relationships of Triangles</p> <p>Points of Concurrency</p> <p>Direct and Indirect Proof</p> <p>Triangle Congruence: SSS & SAS</p> <p>Triangle Congruence: ASA & AAS</p> <p>Triangle Congruence: Right Triangles</p> <p>Properties of Quadrilaterals</p> <p>Introduction to Quadrilaterals</p> <p>Kites and Trapezoids</p> <p>Parallelograms and Rhombi</p> <p>Rectangles and Squares</p> <p>Sum of the Interior Angles Measures in a Polygon</p> <p>Sum of the Exterior Angles Measures in a Polygon</p>

19-1 : Finding Parts of Rhombi			
Unit 20 : Single Event Probability 20-1 : Finding Simple Probabilities 20-2 : Finding Disjoint Probabilities 20-3 : Finding Theoretical and Experimental Probabilities	UNIT 04: THE CHANCE OF WINNING	7	Counting Methods and Probability
Unit 21 : Independent and Dependent Probabilities 21-1 : Finding the Sample Space for Independent Events 21-2 : Finding the Sample Space for Dependent Events 21-3 : Finding the Sample Space for Independent and Dependent Events 21-4 : Finding Compound Probabilities		7.1	Simple Probability and Sample Spaces
		7.2	Compound and Conditional Probability
		7.3	Permutations and Combinations.
		7.4	Independent Trials
		7.5	Expected Value
		7.6	Experimental Probability
Unit 22 : Measures of Central Tendency 22-1 : Finding Mean, Median, Mode, and Range 22-2 : Determining Appropriate Measures 22-3 : Measuring the Effects of Changing Data Sets 22-4 : Finding a Data Value Given a Mean		8	Data Analysis
		8.1	Measures of Central Tendency
		8.2	Population Data and Samples
		8.3	Population and Sample Means
	8.4	Collecting and Analyzing Sample Data	
Unit 23 : Box and Whisker Plots 23-1 : Identifying Key Characteristics from a Data Set 23-2 : Interpreting Box and Whisker Plots 23-3 : Comparing Data Sets			
Unit 24 : Variance and Standard Deviation 24-1 : Computing Variance and Standard Deviation			
Unit 25 : Introduction to Linear, Quadratic, and Exponential Transformations 25-1 : Transforming using Verbal Statements, Graphs, and Equations 25-2 : Transforming using Tables of Values	UNIT 05: ALGEBRA IN CONTEXT	9	Function Transformations and Symmetry
Unit 26 : Introduction to Linear, Quadratic, Exponential, Cubic, and Square Root Transformations 26-1 : Transforming using Verbal Statements, Graphs, and Equations		9.1	Vertical and Horizontal Translations
		9.2	Dilations and Reflections
		9.3	Symmetry and Odd/Even
		9.4	Solving Equations Graphically
		10	Problem Solving with Functions
	10.1	Calculating Roots of Quadratic Equations and Zeros of Quadratic Functions	
	10.2	Factoring Polynomials	
	10.3	Rational Equations and Functions	

26-2 : Transforming using Tables of Values		10.4	Work and Mixture Problems
Unit 27 : Introduction to Function Transformations		10.5	Radical Equations and Functions
27-1 : Transforming using Verbal Statements, Graphs, and Equations		10.6	Algebraic and Graphical Connections
27-2 : Transforming using Tables of Values			
Unit 28 : Introduction to Quadratic Equation Solving using Factoring			
28-1 : Solving Quadratic Equations by Factoring			
Unit 29 : Introduction to Rational Expressions			
29-1 : Simplifying Rational Expressions			
29-2 : Multiplying and Dividing Rational Expressions			
29-3 : Adding and Subtracting Rational Expressions			
Unit 30 : Introduction to Rational Equations			
30-1 : Solving Rational Equations that Result in Linear Equations			
30-2 : Solving Rational Equations that Result in Quadratic Equations			
30-3 : Solving Rational Equations with Extraneous Solutions			
Unit 31 : Introduction to Rational Models and Independent Variables			
31-1 : Modeling Ratios as Rational Functions			
31-2 : Using Rational Models			
Unit 32 : Introduction to Work, Mixture, and Distance Problems			
32-1 : Modeling with Rational Functions			
32-2 : Modeling and Solving with Rational Functions			

Unit 33 : Distance and Midpoint 33-1 : Finding Distances using the Pythagorean Theorem 33-2 : Finding Distances using the Distance Formula 33-3 : Finding Midpoints 33-4 : Finding Distances and Midpoints Unit 34 : Finding Equations of a Line 34-1 : Modeling Given Slope and a Point 34-2 : Finding Slopes 34-3 : Modeling given Two Points 34-4 : Modeling Parallel and Perpendicular Lines 34-5 : Modeling Given an Initial Point	UNIT 06: COORDINATE GEOMETRY	11	Coordinate Geometry
		11.1	The Distance Formula
		11.2	The Midpoint Formula
		11.3	Parallel and Perpendicular Lines in the Coordinate Plane
		11.4	Triangles in the Coordinate Plane
		11.5	Quadrilaterals in the Coordinate Plane

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