Algebra I | Georgia's K–12 Mathematics Standards Correlation to *Eureka Math*®

About *Eureka Math*

Created by Great Minds®, a mission-driven Public Benefit Corporation, *Eureka Math*® helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

Aligned

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Data

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

Full Suite of Resources

Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example: A STORY OF FUNCTIONS Lesson 8 M4 ALGEBRA I **Problem Set Sample Solutions** MP.3 1. Khaya stated that every y-value of the graph of a quadratic function has two different x-values. Do you agree or disagree with Khaya? Explain your answer. *The graph of a quadratic function has two different x-values for each y-value except at the vertex where there is only one.* 2. Is it possible for the graphs of two *different* quadratic functions to each have $x = -3$ as its line of symmetry and both have a maximum at $y = 5$? Explain and support your answer with a sketch of the graphs. *Students should sketch two graphs with vertex at $(-3, 5)$ and different x-intercepts.*
MP.2 Reason abstractly and quantitatively.	
MP.3 Construct viable arguments and critique the reasoning of others.	
MP.4 Model with mathematics.	
MP.5 Use appropriate tools strategically.	
MP.6 Attend to precision.	
MP.7 Look for and make use of structure.	
MP.8 Look for and express regularity in repeated reasoning.	

Mathematical Modeling Framework	Aligned Components of *Eureka Math*
MF.1 Explore and describe real-life, mathematical situations or problems.	Lessons in every module engage students in mathematical modeling.
MF.2 Gather information, make assumptions, and define variables related to the problem.	
MF.3 Create a model and arrive at a solution to explain the problem presented.	
MF.4 Analyze and revise models, as necessary.	
MF.5 Evaluate the model and interpret solutions generated from other models. Draw and validate conclusions.	

Framework for Statistical Reasoning	Aligned Components of *Eureka Math*
SR.I **Formulate Statistical Investigative Questions** Ask questions that anticipate variability.	Lessons in Modules 2 and 5 engage students in statistical reasoning.
SR.II **Collect & Consider the Data** Ensure that data collection designs acknowledge variability.	
SR.III **Analyze the Data** Make sense of data and communicate what the data mean using pictures (graphs) and words. Give an accounting of variability, as appropriate.	
SR.IV **Interpret the Results** Answer statistical investigative questions based on the collected data.	

Functional & Graphical Reasoning—function notation, modeling linear functions, linear vs. nonlinear comparisons

A.FGR.2 Construct and interpret arithmetic sequences as functions, algebraically and graphically, to model and explain real-life phenomena. Use formal notation to represent linear functions and the key characteristics of graphs of linear functions, and informally compare linear and non-linear functions using parent graphs.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.2.1 Use mathematically applicable situations algebraically and graphically to build and interpret arithmetic sequences as functions whose domain is a subset of the integers.	Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns? Algebra I M3 Lesson 2: Recursive Formulas for Sequences Algebra I M3 Lesson 3: Arithmetic and Geometric Sequences Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services? Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M5 Lesson 2: Analyzing a Data Set Algebra I M5 Lesson 3: Analyzing a Verbal Description Algebra I M5 Lesson 5: Modeling from a Sequence Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 8: Modeling a Context from a Verbal Description Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description
A.FGR.2.2 Construct and interpret the graph of a linear function that models real-life phenomena and represent key characteristics of the graph using formal notation.	G8 M6 Lesson 1: Modeling Linear Relationships G8 M6 Lesson 2: Interpreting Rate of Change and Initial Value G8 M6 Lesson 3: Representations of a Line *Supplemental material is necessary to address representing key characteristics of the graph using formal notation.*

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.2.3 Relate the domain and range of a linear function to its graph and, where applicable, to the quantitative relationship it describes. Use formal interval and set notation to describe the domain and range of linear functions.	Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 9: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 10: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 11: The Graph of a Function Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$
A.FGR.2.4 Use function notation to build and evaluate linear functions for inputs in their domains and interpret statements that use function notation in terms of a mathematical framework.	Algebra I M3 Lesson 2: Recursive Formulas for Sequences Algebra I M3 Lesson 3: Arithmetic and Geometric Sequences Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services? Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 9: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 10: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 11: The Graph of a Function
A.FGR.2.5 Analyze the difference between linear functions and nonlinear functions by informally analyzing the graphs of various parent functions (linear, quadratic, exponential, absolute value, square root, and cube root parent curves).	G8 M5 Lesson 3: Linear Functions and Proportionality G8 M5 Lesson 5: Graphs of Functions and Equations G8 M5 Lesson 6: Graphs of Linear Functions and Rate of Change G8 M5 Lesson 7: Comparing Linear Functions and Graphs G8 M5 Lesson 8: Graphs of Simple Nonlinear Functions Algebra I M4 Lesson 18: Graphing Cubic, Square Root, and Cube Root Functions Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways Algebra I M5 Lesson 1: Analyzing a Graph

Geometric & Spatial Reasoning—distance, midpoint, slope, area, and perimeter

A.GSR.3 Solve problems involving distance, midpoint, slope, area, and perimeter to model and explain real-life phenomena.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.GSR.3.1 Solve real-life problems involving slope, parallel lines, perpendicular lines, area, and perimeter.	Geometry M4 Topic A: Connecting Algebra and Geometry Through Coordinates Geometry M4 Topic B: Perpendicular and Parallel Lines in the Cartesian Plane Geometry M4 Topic C: Perimeters and Areas of Polygonal Regions in the Cartesian Plane
A.GSR.3.2 Apply the distance formula, midpoint formula, and slope of line segments to solve real-world problems.	G8 M2 Lesson 16: Applications of the Pythagorean Theorem G8 M7 Lesson 17: Distance on the Coordinate Plane Geometry M4 Topic A: Connecting Algebra and Geometry Through Coordinates Geometry M4 Lesson 12: Dividing Segments Proportionately Geometry M4 Lesson 13: Analytic Proofs of Theorems Previously Proved by Synthetic Means

Patterning & Algebraic Reasoning—linear inequalities and systems of linear inequalities

A.PAR.4 Create, analyze, and solve linear inequalities in two variables and systems of linear inequalities to model real-life phenomena.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.4.1 Create and solve linear inequalities in two variables to represent relationships between quantities including mathematically applicable situations; graph inequalities on coordinate axes with labels and scales.	Algebra I M1 Lesson 21: Solution Sets to Inequalities with Two Variables

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.4.2 Represent constraints of linear inequalities and interpret data points as possible or not possible.	Algebra I M1 Lesson 21: Solution Sets to Inequalities with Two Variables
A.PAR.4.3 Solve systems of linear inequalities by graphing, including systems representing a mathematically applicable situation.	Algebra I M1 Lesson 21: Solution Sets to Inequalities with Two Variables Algebra I M1 Lesson 22: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities

Numerical Reasoning—rational and irrational numbers, square roots and cube roots

A.NR.5 Investigate rational and irrational numbers and rewrite expressions involving square roots and cube roots.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.NR.5.1 Rewrite algebraic and numeric expressions involving radicals.	Algebra II M3 Lesson 1: Integer Exponents Algebra II M3 Lesson 3: Rational Exponents Algebra II M3 Lesson 4: Properties of Exponents and Radicals
A.NR.5.2 Using numerical reasoning, show and explain that the sum or product of rational numbers is rational, the sum of a rational number and an irrational number is irrational, and the product of a nonzero rational number and an irrational number is irrational.	Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square

Patterning & Algebraic Reasoning—quadratic expressions & equations

A.PAR.6 Build quadratic expressions and equations to represent and model real-life phenomena; solve quadratic equations in mathematically applicable situations.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.6.1 Interpret quadratic expressions and parts of a quadratic expression that represent a quantity in terms of its context.	Algebra I M4 Lesson 1: Multiplying and Factoring Polynomial Expressions Algebra I M4 Lesson 2: Multiplying and Factoring Polynomial Expressions Algebra I M4 Lesson 3: Advanced Factoring Strategies for Quadratic Expressions Algebra I M4 Lesson 4: Advanced Factoring Strategies for Quadratic Expressions Algebra I M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$
A.PAR.6.2 Fluently choose and produce an equivalent form of a quadratic expression to reveal and explain properties of the quantity represented by the expression.	Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 11: Completing the Square Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 15: Using the Quadratic Formula Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.6.3 Create and solve quadratic equations in one variable and explain the solution in the framework of applicable phenomena.	Algebra I M4 Lesson 5: The Zero Product Property Algebra I M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 7: Creating and Solving Quadratic Equations in One Variable Algebra I M4 Lesson 13: Solving Quadratic Equations by Completing the Square Algebra I M4 Lesson 14: Deriving the Quadratic Formula Algebra I M4 Lesson 15: Using the Quadratic Formula Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description
A.PAR.6.4 Represent constraints by quadratic equations and interpret data points as possible or not possible in a modeling framework.	Algebra I M4 Lesson 7: Creating and Solving Quadratic Equations in One Variable Algebra I M4 Lesson 23: Modeling with Quadratic Functions Algebra I M4 Lesson 24: Modeling with Quadratic Functions

Functional & Graphical Reasoning—quadratic functions

A.FGR.7 Construct and interpret quadratic functions from data points to model and explain real-life phenomena; describe key characteristics of the graph of a quadratic function to explain a mathematically applicable situation for which the graph serves as a model.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.7.1 Use function notation to build and evaluate quadratic functions for inputs in their domains and interpret statements that use function notation in terms of a given framework.	Algebra I M3 Lesson 10: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 11: The Graph of a Function Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions Algebra I M5 Lesson 1: Analyzing a Graph Algebra I M5 Lesson 3: Analyzing a Verbal Description Algebra I M5 Lesson 5: Modeling from a Sequence Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description
A.FGR.7.2 Identify the effect on the graph generated by a quadratic function when replacing $f(x)$ with $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs.	Algebra I M3 Lesson 17: Four Interesting Transformations of Functions Algebra I M3 Lesson 18: Four Interesting Transformations of Functions Algebra I M3 Lesson 19: Four Interesting Transformations of Functions Algebra I M3 Lesson 20: Four Interesting Transformations of Functions Algebra I M4 Lesson 19: Translating Graphs of Functions Algebra I M4 Lesson 20: Stretching and Shrinking Graphs of Functions Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.7.3 Graph and analyze the key characteristics of quadratic functions.	Algebra I M1 Lesson 2: Graphs of Quadratic Functions Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 10: Interpreting Quadratic Functions from Graphs and Tables Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 19: Translating Graphs of Functions Algebra I M4 Lesson 20: Stretching and Shrinking Graphs of Functions Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions Algebra I M5 Lesson 1: Analyzing a Graph
A.FGR.7.4 Relate the domain and range of a quadratic function to its graph and, where applicable, to the quantitative relationship it describes.	Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 10: Interpreting Quadratic Functions from Graphs and Tables Algebra I M5 Lesson 1: Analyzing a Graph Algebra I M5 Lesson 4: Modeling a Context from a Graph
A.FGR.7.5 Rewrite a quadratic function representing a mathematically applicable situation to reveal the maximum or minimum value of the function it defines. Explain what the value describes in context.	Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 15: Using the Quadratic Formula Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.7.6 Create quadratic functions in two variables to represent relationships between quantities; graph quadratic functions on the coordinate axes with labels and scales.	Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 19: Translating Graphs of Functions Algebra I M4 Lesson 20: Stretching and Shrinking Graphs of Functions Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions Algebra I M4 Lesson 24: Modeling with Quadratic Functions Algebra I M5 Topic A: Elements of Modeling Algebra I M5 Lesson 4: Modeling a Context from a Graph Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 7: Modeling a Context from Data Algebra I M5 Lesson 8: Modeling a Context from a Verbal Description
A.FGR.7.7 Estimate, calculate, and interpret the average rate of change of a quadratic function and make comparisons to the average rate of change of linear functions.	Algebra I M4 Lesson 8: Exploring the Symmetry in Graphs of Quadratic Functions Algebra I M4 Lesson 10: Interpreting Quadratic Functions from Graphs and Tables Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.7.8 Write a function defined by a quadratic expression in different but equivalent forms to reveal and explain different properties of the function.	Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 15: Using the Quadratic Formula Algebra I M4 Lesson 16: Graphing Quadratic Equations from the Vertex Form, $y = a(x - h)^2 + k$ Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$ Algebra I M4 Lesson 21: Transformations of the Quadratic Parent Function, $f(x) = x^2$ Algebra I M4 Lesson 23: Modeling with Quadratic Functions
A.FGR.7.9 Compare characteristics of two functions each represented in a different way.	Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways *Supplemental material is necessary to address comparing characteristics of two quadratic functions each represented in a different way.*

Patterning & Algebraic Reasoning—exponential expressions and equations

A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.8.1 Interpret exponential expressions and parts of an exponential expression that represent a quantity in terms of its framework.	Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M3 Lesson 22: Modeling an Invasive Species Population Algebra I M3 Lesson 23: Newton's Law of Cooling Algebra II M3 Lesson 23: Bean Counting Algebra II M3 Lesson 26: Percent Rate of Change

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.8.2 Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.	Algebra I M5 Lesson 5: Modeling from a Sequence Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 7: Modeling a Context from Data Algebra I M5 Lesson 8: Modeling a Context from a Verbal Description Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description
A.PAR.8.3 Create exponential equations in two variables to represent relationships between quantities, including in mathematically applicable situations; graph equations on coordinate axes with labels and scales.	Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns? Algebra I M3 Lesson 5: The Power of Exponential Growth Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Lesson 7: Exponential Decay Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M3 Lesson 22: Modeling an Invasive Species Population Algebra I M3 Lesson 23: Newton's Law of Cooling Algebra I M5 Topic A: Elements of Modeling Algebra I M5 Lesson 4: Modeling a Context from a Graph Algebra I M5 Lesson 5: Modeling from a Sequence Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 8: Modeling a Context from a Verbal Description

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.PAR.8.4 Represent constraints by exponential equations and interpret data points as possible or not possible in a modeling environment.	Algebra I M3 Lesson 5: The Power of Exponential Growth Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Lesson 7: Exponential Decay Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M3 Lesson 22: Modeling an Invasive Species Population Algebra I M3 Lesson 23: Newton's Law of Cooling Algebra I M5 Topic A: Elements of Modeling Algebra I M5 Lesson 4: Modeling a Context from a Graph Algebra I M5 Lesson 5: Modeling from a Sequence Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 8: Modeling a Context from a Verbal Description

Functional & Graphical Reasoning—exponential functions

A.FGR.9 Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.9.1 Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.	Algebra I M3 Topic A: Linear and Exponential Sequences Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 10: Representing, Naming, and Evaluating Functions Algebra I M3 Lesson 11: The Graph of a Function

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.FGR.9.2 Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.	Algebra I M1 Lesson 3: Graphs of Exponential Functions Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 23: Newton's Law of Cooling Algebra I M5 Lesson 2: Analyzing a Data Set Algebra I M5 Lesson 4: Modeling a Context from a Graph Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 7: Modeling a Context from Data Algebra II M3 Lesson 18: Graphs of Exponential Functions and Logarithmic Functions
A.FGR.9.3 Identify the effect on the graph generated by an exponential function when replacing $f(x)$ with $f(x) + k$, and $kf(x)$, for specific values of k (both positive and negative); find the value of k given the graphs.	Algebra II M3 Lesson 20: Transformations of the Graphs of Logarithmic and Exponential Functions
A.FGR.9.4 Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.	Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns Algebra I M3 Lesson 2: Recursive Formulas for Sequences Algebra I M3 Lesson 3: Arithmetic and Geometric Sequences Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services?
A.FGR.9.5 Compare characteristics of two functions each represented in a different way.	Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again *Supplemental material is necessary to address comparing characteristics of two exponential functions each represented in a different way.*

Data & Statistical Reasoning—univariate data and single quantitative variables; bivariate data

A.DSR.10 Collect, analyze, and interpret univariate quantitative data to answer statistical investigative questions that compare groups to solve real-life problems; Represent bivariate data on a scatter plot and fit a function to the data to answer statistical questions and solve real-life problems.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.DSR.10.1 Use statistics appropriate to the shape of the data distribution to compare and represent center (median and mean) and variability (interquartile range, standard deviation) of two or more distributions by hand and using technology.	Algebra I M2 Topic A: Shapes and Centers of Distributions Algebra I M2 Topic B: Describing Variability and Comparing Distributions
A.DSR.10.2 Interpret differences in shape, center, and variability of the distributions based on the investigation, accounting for possible effects of extreme data points (outliers).	Algebra I M2 Topic A: Shapes and Centers of Distributions Algebra I M2 Topic B: Describing Variability and Comparing Distributions
A.DSR.10.3 Represent data on two quantitative variables on a scatter plot and describe how the variables are related.	Algebra I M2 Topic D: Numerical Data on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data
A.DSR.10.4 Interpret the slope (predicted rate of change) and the intercept (constant term) of a linear model based on the investigation of the data.	Algebra I M2 Lesson 14: Modeling Relationships with a Line

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
A.DSR.10.5 Calculate the line of best fit and interpret the correlation coefficient, r, of a linear fit using technology. Use r to describe the strength of the goodness of fit of the regression. Use the linear function to make predictions and assess how reasonable the prediction is in context.	Algebra I M2 Lesson 14: Modeling Relationships with a Line Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M2 Lesson 20: Analyzing Data Collected on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data
A.DSR.10.6 Decide which type of function is most appropriate by observing graphed data.	Algebra I M2 Lesson 12: Relationships Between Two Numerical Variables Algebra I M2 Lesson 13: Relationships Between Two Numerical Variables Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M5 Lesson 7: Modeling a Context from Data
A.DSR.10.7 Distinguish between correlation and causation.	Algebra I M2 Lesson 19: Interpreting Correlation