Algebra I | Tennessee Academic Standards for Mathematics 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

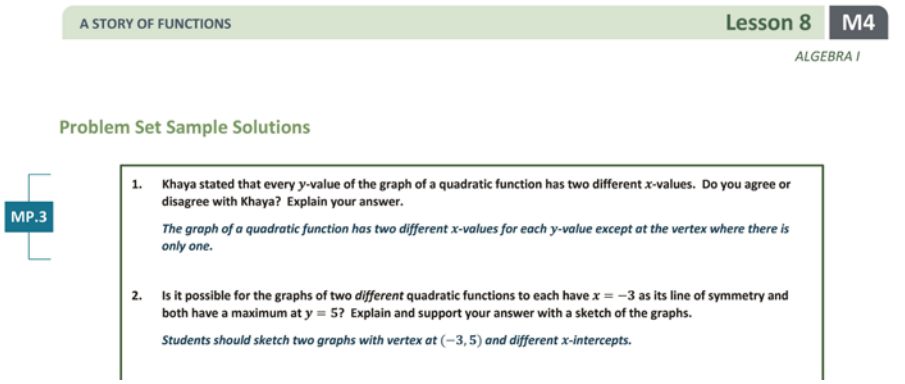
Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

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: 
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.	

Quantities

A1.N.Q.A Reason quantitatively and use units to understand problems.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.N.Q.A.1 Use units as a way to understand real-world problems.	*This standard is fully addressed by the lessons aligned to its subsections.*
A1.N.Q.A.1a Choose and interpret the scale and the origin in graphs and data displays.	Algebra I M1 Topic A: Introduction to Functions Studied This Year—Graphing Stories Algebra I M1 Lesson 25: Solving Problems in Two Ways—Rates and Algebra Algebra I M1 Lesson 28: Federal Income Tax
A1.N.Q.A.1b Use appropriate quantities in formulas, converting units as necessary.	Algebra I M1 Topic A: Introduction to Functions Studied This Year—Graphing Stories Algebra I M1 Lesson 25: Solving Problems in Two Ways—Rates and Algebra Algebra I M1 Lesson 28: Federal Income Tax
A1.N.Q.A.1c Define and justify appropriate quantities within a context for the purpose of modeling.	Algebra I M1 Topic A: Introduction to Functions Studied This Year—Graphing Stories Algebra I M5 Lesson 1: Analyzing a Graph Algebra I M5 Lesson 4: Modeling a Context from a Graph 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
A1.N.Q.A.1d Choose an appropriate level of accuracy when reporting quantities.	Algebra I M1 Topic A: Introduction to Functions Studied This Year—Graphing Stories Algebra I M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 7: Modeling a Context from Data Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description

Seeing Structure in Expressions

A1.A.SSE.A Interpret the structure of expressions.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.	Algebra I M1 Lesson 26: Recursive Challenge Problem—The Double and Add 5 Game Algebra I M1 Lesson 27: Recursive Challenge Problem—The Double and Add 5 Game Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services? 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 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 12: Completing the Square Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$
A1.A.SSE.A.1a Interpret parts of an expression, such as terms, factors, and coefficients.	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

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.SSE.A.1b Interpret complicated expressions by viewing one or more of their parts as a single entity.	Algebra I M3 Lesson 4: Why Do Banks Pay YOU to Provide Their Services? 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 M4 Lesson 6: Solving Basic One-Variable Quadratic Equations Algebra I M4 Lesson 12: Completing the Square Algebra I M4 Lesson 17: Graphing Quadratic Functions from the Standard Form, $f(x) = ax^2 + bx + c$

Arithmetic with Polynomials and Rational Expressions

A1.A.APR.A Perform arithmetic operations on polynomials.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.APR.A.1 Add, subtract, and multiply polynomials. Use these operations to demonstrate that polynomials form a closed system that adhere to the same properties of operations as the integers.	Algebra I M1 Lesson 8: Adding and Subtracting Polynomials Algebra I M1 Lesson 9: Multiplying Polynomials 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

Creating Equations

A1.A.CED.A Create equations that describe numbers or relationships.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems in a real-world context.	Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator Algebra I M1 Lesson 25: Solving Problems in Two Ways—Rates and Algebra Algebra I M1 Lesson 26: Recursive Challenge Problem—The Double and Add 5 Game Algebra I M1 Lesson 27: Recursive Challenge Problem—The Double and Add 5 Game 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 M5 Lesson 6: Modeling a Context from Data Algebra I M5 Lesson 9: Modeling a Context from a Verbal Description
A1.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. Graph equations with two variables on coordinate axes with labels and scales, and use the graphs to make predictions.	Algebra I M1 Lesson 5: Two Graphing Stories Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables Algebra I M1 Lesson 23: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities Algebra I M1 Lesson 28: Federal Income Tax 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 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 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

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.CED.A.3 Create individual and systems of equations and/or inequalities to represent constraints in a contextual situation, and interpret solutions as viable or non-viable.	Algebra I M1 Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by "And" or "Or" Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities Algebra I M1 Lesson 27: Recursive Challenge Problem—The Double and Add 5 Game Algebra I M3 Lesson 8: Why Stay with Whole Numbers? Algebra I M3 Lesson 24: Piecewise and Step Functions in Context
A1.A.CED.A.4 Rearrange formulas to isolate a quantity of interest using algebraic reasoning.	Algebra I M1 Lesson 19: Rearranging Formulas

Reasoning with Equations and Inequalities

A1.A.REI.A Understand solving equations as a process of reasoning and explain the reasoning.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.A.1 Understand solving equations as a process of reasoning and explain the reasoning. Construct a viable argument to justify a solution method.	Algebra I M1 Lesson 12: Solving Equations Algebra I M1 Lesson 13: Some Potential Dangers When Solving Equations Algebra I M1 Lesson 17: Equations Involving Factored Expressions Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator

Reasoning with Equations and Inequalities

A1.A.REI.B Solve equations and inequalities in one variable.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.B.2 Solve linear and absolute value equations and inequalities in one variable.	Algebra I M1 Lesson 10: True and False Equations Algebra I M1 Lesson 11: Solution Sets for Equations and Inequalities Algebra I M1 Lesson 12: Solving Equations Algebra I M1 Lesson 13: Some Potential Dangers When Solving Equations Algebra I M1 Lesson 14: Solving Inequalities Algebra I M1 Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by "And" or "Or" Algebra I M1 Lesson 16: Solving and Graphing Inequalities Joined by "And" or "Or" Algebra I M1 Lesson 17: Equations Involving Factored Expressions Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator Algebra I M1 Lesson 19: Rearranging Formulas Algebra I M1 Lesson 25: Solving Problems in Two Ways—Rates and Algebra Algebra I M1 Lesson 27: Recursive Challenge Problem—The Double and Add 5 Game Algebra I M3 Lesson 16: Graphs Can Solve Equations Too
A1.A.REI.B.2a Solve linear equations and inequalities, including compound inequalities, in one variable. Represent solutions algebraically and graphically.	Algebra I M1 Lesson 10: True and False Equations Algebra I M1 Lesson 11: Solution Sets for Equations and Inequalities Algebra I M1 Lesson 12: Solving Equations Algebra I M1 Lesson 13: Some Potential Dangers When Solving Equations Algebra I M1 Lesson 14: Solving Inequalities Algebra I M1 Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by "And" or "Or"

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.B.2a *continued*	Algebra I M1 Lesson 16: Solving and Graphing Inequalities Joined by "And" or "Or" Algebra I M1 Lesson 17: Equations Involving Factored Expressions Algebra I M1 Lesson 18: Equations Involving a Variable Expression in the Denominator Algebra I M1 Lesson 19: Rearranging Formulas Algebra I M1 Lesson 25: Solving Problems in Two Ways—Rates and Algebra Algebra I M1 Lesson 27: Recursive Challenge Problem—The Double and Add 5 Game
A1.A.REI.B.2b Solve absolute value equations and inequalities in one variable. Represent solutions algebraically and graphically.	Algebra I M3 Lesson 16: Graphs Can Solve Equations Too *Supplemental material is necessary to address solving absolute value inequalities in one variable.*
A1.A.REI.B.3 Solve quadratic equations and inequalities in one variable.	Algebra I M1 Lesson 11: Solution Sets for Equations and Inequalities 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
A1.A.REI.B.3a Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, knowing and applying the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when a quadratic equation has solutions that are not real numbers.	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 14: Deriving the Quadratic Formula Algebra I M4 Lesson 15: Using the Quadratic Formula

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.B.3b Solve quadratic inequalities using the graph of the related quadratic equation.	*Supplemental material is necessary to address this standard.*

Reasoning with Equations and Inequalities

A1.A.REI.C Solve systems of equations.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.C.4 Write and solve a system of linear equations in real-world context.	Algebra I M1 Lesson 22: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 23: Solution Sets to Simultaneous Equations Algebra I M1 Lesson 24: Applications of Systems of Equations and Inequalities

Reasoning with Equations and Inequalities

A1.A.REI.D Represent and solve equations and inequalities graphically.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.D.5 Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	Algebra I M1 Lesson 20: Solution Sets to Equations with Two Variables

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.A.REI.D.6 Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$. Find approximate solutions by graphing the functions or making a table of values, using technology when appropriate.	Algebra I M3 Lesson 16: Graphs Can Solve Equations Too
A1.A.REI.D.7 Graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	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

Interpreting Functions

A1.F.IF.A Understand the concept of a function and use function notation.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.A.1 Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.	Algebra I M3 Lesson 1: Integer Sequences—Should You Believe in Patterns? 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 $y = f(x)$

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.A.2 Use function notation.	*This standard is fully addressed by the lessons aligned to its subsections.*
A1.F.IF.A.2a Use function notation to evaluate functions for inputs in their domains, including functions of two variables.	Algebra I M3 Topic A: Linear and Exponential Sequences 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
A1.F.IF.A.2b 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 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
A1.F.IF.A.3 Understand geometric formulas as functions.	*Supplemental material is necessary to address this standard.*

Interpreting Functions

A1.F.IF.B Interpret functions that arise in applications in terms of the context.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.	Algebra I M3 Lesson 13: Interpreting the Graph of a Function Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 23: Newton's Law of Cooling 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 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 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
A1.F.IF.B.5 Relate the domain of a function to its graph and, where applicable, to the context of the function it models.	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 $y = f(x)$ Algebra I M4 Lesson 9: Graphing Quadratic Functions from Factored Form, $f(x) = a(x - m)(x - n)$ Algebra I M5 Lesson 1: Analyzing a Graph Algebra I M5 Lesson 4: Modeling a Context from a Graph

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.B.6 Calculate and interpret the average rate of change of a function (presented algebraically or as a table) over a specified interval. Estimate and interpret the rate of change from a graph.	Algebra I M3 Lesson 6: Exponential Growth—U.S. Population and World Population Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M3 Lesson 22: Modeling an Invasive Species Population 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 Algebra I M5 Lesson 4: Modeling a Context from a Graph

Interpreting Functions

A1.F.IF.C Analyze functions using different representations.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.C.7 Graph functions expressed algebraically and show key features of the graph by hand and using technology.	Algebra I M3 Lesson 11: The Graph of a Function Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$ Algebra I M3 Topic C: Transformations of 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 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 18: Graphing Cubic, Square Root, and Cube Root Functions Algebra I M4 Lesson 19: Translating Graphs of Functions

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.C.7 ***continued***	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
A1.F.IF.C.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	*This standard is fully addressed by the lessons aligned to its subsection.*
A1.F.IF.C.8a Rewrite quadratic functions to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a real-world 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
A1.F.IF.C.9 Compare properties of functions represented algebraically, graphically, numerically in tables, or by verbal descriptions.	*This standard is fully addressed by the lessons aligned to its subsections.*

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.IF.C.9a Compare properties of two different functions. Functions may be of different types and/or represented in different ways.	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 14: Linear and Exponential Models—Comparing Growth Rates Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M4 Lesson 22: Comparing Quadratic, Square Root, and Cube Root Functions Represented in Different Ways
A1.F.IF.C.9b Compare properties of the same function on two different intervals or represented in two different ways.	Algebra I M1 Lesson 1: Graphs of Piecewise Linear Functions Algebra I M3 Lesson 12: The Graph of the Equation $y = f(x)$ Algebra I M3 Lesson 13: Interpreting the Graph of a Function 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

Building Functions

A1.F.BF.A Build a function that models a relationship between two quantities.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.BF.A.1 Build a function that describes a relationship between two quantities.	*This standard is fully addressed by the lessons aligned to its subsection.*

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.BF.A.1a Determine steps for calculation, a recursive process, or an explicit expression from a context.	Algebra I M3 Topic A: Linear and Exponential Sequences Algebra I M3 Topic D: Using Functions and Graphs to Solve Problems Algebra I M5 Topic A: Elements of Modeling 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

Building Functions

A1.F.BF.B Build new functions from existing functions.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.BF.B.2 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given 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, $f(x) = x^2$

Linear and Exponential Models

A1.F.LE.A Construct and compare linear and exponential models and solve problems.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.LE.A.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.	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 14: Linear and Exponential Models—Comparing Growth Rates 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
A1.F.LE.A.1a Know that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.	Algebra I M3 Lesson 14: Linear and Exponential Models—Comparing Growth Rates
A1.F.LE.A.1b Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.	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

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.LE.A.1c Recognize situations in which a quantity grows or decays by a constant factor per unit interval relative to another.	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
A1.F.LE.A.2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a table, a description of a relationship, or input-output pairs.	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 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 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 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

Linear and Exponential Models

A1.F.LE.B Interpret expressions for functions in terms of the situation they model.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.F.LE.B.3 Interpret the parameters in a linear or exponential function in terms of a context.	Algebra I M3 Lesson 21: Comparing Linear and Exponential Models Again Algebra I M3 Lesson 22: Modeling an Invasive Species Population

Interpreting Categorical and Quantitative Data

A1.S.ID.A Summarize, represent, and interpret data on a single count or measurement variable.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.S.ID.A.1 Use measures of center to solve real-world and mathematical problems.	Algebra I M2 Topic A: Shapes and Centers of Distributions Algebra I M2 Lesson 4: Summarizing Deviations from the Mean Algebra I M2 Lesson 8: Comparing Distributions
A1.S.ID.A.2 Use statistics appropriate to the shape of the data distribution to compare center (mean, median, and/or mode) and spread (range, interquartile range) of two or more different data sets.	Algebra I M2 Lesson 3: Estimating Centers and Interpreting the Mean as a Balance Point Algebra I M2 Lesson 4: Summarizing Deviations from the Mean Algebra I M2 Lesson 8: Comparing Distributions *Supplemental material is necessary to address mode and range.*
A1.S.ID.A.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points.	Algebra I M2 Lesson 2: Describing the Center of a Distribution Algebra I M2 Lesson 3: Estimating Centers and Interpreting the Mean as a Balance Point Algebra I M2 Topic B: Describing Variability and Comparing Distributions

Interpreting Categorical and Quantitative Data

A1.S.ID.B Summarize, represent, and interpret data on two categorical and quantitative variables.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.S.ID.B.4 Represent data from two quantitative variables on a scatter plot, and describe how the variables are related. Fit a function to the data; use functions fitted to data to solve problems in the context of the data.	Algebra I M2 Topic D: Numerical Data on Two Variables Algebra I M5 Lesson 7: Modeling a Context from Data

Interpreting Categorical and Quantitative Data

A1.S.ID.C Interpret linear models.

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.S.ID.C.5 Interpret the rate of change and the constant term of a linear model in the context of data.	Algebra I M2 Lesson 14: Modeling Relationships with a Line
A1.S.ID.C.6 Use technology to compute the correlation coefficient of a linear model; interpret the correlation coefficient in the context of the data.	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

Tennessee Academic Standards for Mathematics	Aligned Components of *Eureka Math*
A1.S.ID.C.7 Explain the differences between correlation and causation. Recognize situations where an additional factor may be affecting correlated data.	Algebra I M2 Lesson 19: Interpreting Correlation Algebra I M2 Lesson 20: Analyzing Data Collected on Two Variables