
Algebra I | Georgia's K–12 Mathematics Standards (2021) Correlation to *Eureka Math*²® (2027)

*Eureka Math*² is a research-proven math curriculum that empowers teachers to center instructional techniques on student success. Teachers can foster more “aha!” learning moments by providing the support needed for all learners to build a more confident math mindset.

This *Eureka Math*² edition builds on a strong foundation of effective instruction. It provides teachers with guidance on delivering rigorous instruction that honors student choice and encourages confident problem-solving.

*Eureka Math*² carefully sequences mathematical content to maximize vertical alignment from kindergarten through high school. This kind of sequencing has proven to be essential in students' mastery of math.

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning (UDL) principles so all learners can access the mathematics and take on challenging math concepts. UDL, Differentiation, and Multilingual Learner supports are built into the instructional design and are clearly identified in the *Teach* book.

The curriculum also carries a focus on readability. By eliminating unnecessary words and using clear sentences, the *Eureka Math*² teacher-writers have created one of the most readable mathematics curricula on the market. The curriculum's readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Math Confidence

*Eureka Math*² fosters a classroom culture of learning by encouraging student-led discourse and cognitive engagement that results in confident learners. By leveraging consistent models, routines, and progressions, teachers can remove barriers and allow all students an avenue to success. Within the digital platform, each grade includes wordless videos and digital interactives that spark students' curiosity and help them make conceptual connections. Using the *Learn* books, students wonder, explore, and make sense of mathematics, which helps them develop a strong, positive mathematical identity.

Standards for Mathematical Practice	Aligned Components of <i>Eureka Math</i> ²
<p>MP.1 Make sense of problems and persevere in solving them.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.2 Reason abstractly and quantitatively.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.3 Construct viable arguments and critique the reasoning of others.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.4 Model with mathematics.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.5 Use appropriate tools strategically.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.6 Attend to precision.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.7 Look for and make use of structure.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>
<p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.</p>

Mathematical Modeling

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

Georgia’s K–12 Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>A.MM.1.1</p> <p>Explain applicable, mathematical problems using a mathematical model.</p>	<p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p> <p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p> <p>A1 M6 Lesson 4: The Deal</p> <p>A1 M6 Lesson 5: Solar System Models</p> <p>A1 M6 Lesson 6: Designing a Fundraiser</p> <p>A1 M6 Lesson 7: World Record Doughnut</p>
<p>A.MM.1.2</p> <p>Create mathematical models to explain phenomena that exist in the natural sciences, social sciences, liberal arts, fine and performing arts, and/or humanities domains.</p>	<p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p> <p>A1 M6 Lesson 4: The Deal</p> <p>A1 M6 Lesson 5: Solar System Models</p> <p>A1 M6 Lesson 6: Designing a Fundraiser</p> <p>A1 M6 Lesson 7: World Record Doughnut</p> <p><i>Supplemental material is necessary to fully address this standard.</i></p>

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<p>A.MM.1.3</p> <p>Use units of measure (linear, area, capacity, rates, and time) as a way to make sense of conceptual problems; identify, use, and record appropriate units of measure within the given framework, within data displays, and on graphs; convert units and rates using proportional reasoning given a conversion factor; use units within multi-step problems and formulas; interpret units of input and resulting units of output.</p>	<p>A1 M2 Lesson 7: Low-Flow Showerhead</p> <p>A1 M3 Lesson 12: Comparing Functions</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 5: Solar System Models</p> <p>A1 M6 Lesson 6: Polynomial Identities</p> <p>A1 M6 Lesson 7: World Record Doughnut</p>
<p>A.MM.1.4</p> <p>Use various mathematical representations and structures with this information to represent and solve real-life problems.</p>	<p>A1 M1 Lesson 7: Printing Presses</p> <p>A1 M2 Lesson 7: Low-Flow Showerhead</p> <p>A1 M3 Lesson 12: Comparing Functions</p> <p>A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p>A1 M4 Lesson 24: Another Look at Systems of Equations</p> <p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M4 Lesson 26: Modeling Data with Quadratic Functions</p> <p>A1 M4 Lesson 27: Search and Rescue Helicopter</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p>

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<p>A.MM.1.4 <i>continued</i></p>	<p>A1 M6 Lesson 1: Analyzing Paint Splatters A1 M6 Lesson 2: Using Residual Plots to Select Models for Data A1 M6 Lesson 3: Populations of US Cities A1 M6 Lesson 4: The Deal A1 M6 Lesson 5: Solar System Models A1 M6 Lesson 6: Designing a Fundraiser A1 M6 Lesson 7: World Record Doughnut</p>
<p>A.MM.1.5 Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>A1 M4 Lesson 25: Maximizing Area A1 M6 Lesson 5: Solar System Models</p>

Functional & Graphical Reasoning

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.

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Aligned Components of *Eureka Math*²

<p>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.</p>	<p>A1 M5 Lesson 5: Arithmetic and Geometric Sequences A1 M5 Lesson 6: Representations of Arithmetic and Geometric Sequences</p>
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<p>A.FGR.2.2</p> <p>Construct and interpret the graph of a linear function that models real-life phenomena and represent key characteristics of the graph using formal notation.</p>	<p>A1 M3 Lesson 6: Representations of Functions</p>
<p>A.FGR.2.3</p> <p>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.</p>	<p>A1 M3 Lesson 3: The Graph of a Function</p> <p>A1 M3 Lesson 13: Mars Curiosity Rover</p> <p>A1 M3 Lesson 16: The Absolute Value Function</p> <p>A1 M4 Lesson 2: Projectile Motion</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p><i>Supplemental material is necessary to address interval notation and range.</i></p>
<p>A.FGR.2.4</p> <p>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.</p>	<p>A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions</p> <p>A1 M3 Lesson 6: Representations of Functions</p>

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<p>A.FGR.2.5</p> <p>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).</p>	<p>A1 M1 Lesson 14: Solution Sets of Compound Statements</p> <p>A1 M1 Lesson 15: Solving and Graphing Compound Inequalities</p> <p>A1 M1 Lesson 16: Solving Absolute Value Equations</p> <p>A1 M1 Lesson 17: Solving Absolute Value Inequalities</p> <p>A1 M1 Lesson 18: Applying Absolute Value</p> <p>A1 M5 Lesson 15: Calculating Interest</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p> <p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p> <p><i>Supplemental material is necessary to fully address this standard.</i></p>
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Functional & Graphical Reasoning

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.

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Georgia's K–12 Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>A.FGR.7.1</p> <p>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.</p>	<p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M4 Lesson 26: Modeling Data with Quadratic Functions</p> <p>A1 M4 Lesson 27: Search and Rescue Helicopter</p>
<p>A.FGR.7.2</p> <p>Identify the effect on the graph generated by a quadratic 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.</p>	<p>A1 M4 Lesson 20: Art with Transformations</p>

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<p>A.FGR.7.3</p> <p>Graph and analyze the key characteristics of quadratic functions.</p>	<p>A1 M4 Lesson 1: Falling Objects</p> <p>A1 M4 Lesson 2: Projectile Motion</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 4: Graphs of Quadratic Functions</p> <p>A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form</p> <p>A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form</p> <p>A1 M4 Lesson 19: Transforming the Graphs of Quadratic Functions</p> <p>A1 M4 Lesson 21: Completing the Square to Graph Quadratic Functions</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p>A1 M4 Lesson 24: Another Look at Systems of Equations</p> <p>A1 M4 Lesson 25: Maximizing Area</p>
<p>A.FGR.7.4</p> <p>Relate the domain and range of a quadratic function to its graph and, where applicable, to the quantitative relationship it describes.</p>	<p>A1 M4 Lesson 2: Projectile Motion</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p>
<p>A.FGR.7.5</p> <p>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.</p>	<p>A1 M4 Lesson 1: Falling Objects</p> <p>A1 M4 Lesson 2: Projectile Motion</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form</p> <p>A1 M4 Lesson 21: Completing the Square to Graph Quadratic Functions</p> <p>A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions</p> <p><i>Supplemental material is necessary to fully address this standard.</i></p>

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<p>A.FGR.7.6</p> <p>Create quadratic functions in two variables to represent relationships between quantities; graph quadratic functions on the coordinate axes with labels and scales.</p>	<p>A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form</p> <p>A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts</p> <p>A1 M4 Lesson 25: Maximizing Area</p> <p>A1 M4 Lesson 26: Modeling Data with Quadratic Functions</p> <p>A1 M4 Lesson 27: Search and Rescue Helicopter</p>
<p>A.FGR.7.7</p> <p>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.</p>	<p>A1 M4 Lesson 1: Falling Objects</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form</p> <p>A1 M5 Lesson 15: Calculating Interest</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p>
<p>A.FGR.7.8</p> <p>Write a function defined by a quadratic expression in different but equivalent forms to reveal and explain different properties of the function.</p>	<p>A1 M4 Lesson 1: Falling Objects</p> <p>A1 M4 Lesson 2: Projectile Motion</p> <p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p> <p>A1 M4 Lesson 10: Zeros of Functions</p> <p>A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form</p> <p>A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form</p> <p>A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions</p>
<p>A.FGR.7.9</p> <p>Compare characteristics of two functions each represented in a different way.</p>	<p>A1 M3 Lesson 11: Using Graphs to Solve Equations</p> <p>A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form</p> <p>A1 M4 Lesson 21: Completing the Square to Graph Quadratic Functions</p>

Functional and Graphical Reasoning

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.

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<p>A.FGR.9.1</p> <p>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.</p>	<p>A1 M5 Lesson 16: Exponential Growth</p> <p>A1 M5 Lesson 17: Exponential Decay</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p>
<p>A.FGR.9.2</p> <p>Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</p>	<p>A1 M5 Lesson 11: Graphing Exponential Functions</p> <p>A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1)</p> <p>A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1)</p> <p>A1 M5 Lesson 15: Calculating Interest</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p>
<p>A.FGR.9.3</p> <p>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.</p>	<p>A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1)</p> <p>A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1)</p> <p>A1 M5 Lesson 14: Writing Equations for Exponential Functions from Tables or Graphs</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p>

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<p>A.FGR.9.4</p> <p>Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</p>	<p>A1 M5 Lesson 5: Arithmetic and Geometric Sequences</p> <p>A1 M5 Lesson 6: Representations of Arithmetic and Geometric Sequences</p>
<p>A.FGR.9.5</p> <p>Compare characteristics of two functions each represented in a different way.</p>	<p>A1 M3 Lesson 11: Using Graphs to Solve Equations</p>

Geometric & Spatial Reasoning

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

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<p>A.GSR.3.1</p> <p>Solve real-life problems involving slope, parallel lines, perpendicular lines, area, and perimeter.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>A.GSR.3.2</p> <p>Apply the distance formula, midpoint formula, and slope of line segments to solve real-world problems.</p>	<p>8 M2 Lesson 22: On the Right Path</p> <p><i>Supplemental material is necessary to address this standard.</i></p>

Patterning & Algebraic Reasoning

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

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<p>A.PAR.4.1</p> <p>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.</p>	<p>A1 M2 Lesson 4: Solution Sets of Linear Inequalities in Two Variables</p> <p>A1 M2 Lesson 5: Graphing Linear Inequalities in Two Variables</p> <p>A1 M2 Lesson 6: Applications of Linear Equations and Inequalities</p>
<p>A.PAR.4.2</p> <p>Represent constraints of linear inequalities and interpret data points as possible or not possible.</p>	<p>A1 M1 Lesson 15: Solving and Graphing Compound Inequalities</p> <p>A1 M2 Lesson 6: Applications of Linear Equations and Inequalities</p> <p><i>Supplementary material is necessary to fully address this standard.</i></p>
<p>A.PAR.4.3</p> <p>Solve systems of linear inequalities by graphing, including systems representing a mathematically applicable situation.</p>	<p>A1 M2 Lesson 12: Solution Sets of Systems of Linear Inequalities</p> <p>A1 M2 Lesson 13: Graphing Solution Sets of Systems of Linear Inequalities</p> <p>A1 M2 Lesson 14: Applications of Systems of Linear Inequalities</p> <p>A1 M6 Lesson 6: Designing a Fundraiser</p>

Patterning & Algebraic Reasoning

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

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<p>A.PAR.6.1</p> <p>Interpret quadratic expressions and parts of a quadratic expression that represent a quantity in terms of its context.</p>	<p>A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion</p>
<p>A.PAR.6.2</p> <p>Fluently choose and produce an equivalent form of a quadratic expression to reveal and explain properties of the quantity represented by the expression.</p>	<p>A1 M4 Lesson 10: Zeros of Functions</p> <p>A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form</p> <p>A1 M4 Lesson 22: A Summary of Graphing Quadratic Functions</p>
<p>A.PAR.6.3</p> <p>Create and solve quadratic equations in one variable and explain the solution in the framework of applicable phenomena.</p>	<p>A1 M4 Lesson 5: Solving Equations That Contain Factored Expressions</p> <p>A1 M4 Lesson 6: Solving Quadratic Equations by Factoring: Identities and Guess and Check</p> <p>A1 M4 Lesson 7: Solving Quadratic Equations by Factoring: Splitting the Linear Term</p> <p>A1 M4 Lesson 8: A Summary of Solving Quadratic Equations by Factoring</p> <p>A1 M4 Lesson 9: Creating and Solving Quadratic Equations in One Variable</p> <p>A1 M4 Lesson 13: Using Square Roots to Solve Quadratic Equations</p> <p>A1 M4 Lesson 14: Solving Quadratic Equations by Completing the Square</p> <p>A1 M4 Lesson 15: Deriving the Quadratic Formula</p> <p>A1 M4 Lesson 16: Solving Quadratic Equations</p> <p>A1 M4 Lesson 18: The Quadratic Formula and Zeros of a Function</p>

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<p>A.PAR.6.4</p> <p>Represent constraints by quadratic equations and interpret data points as possible or not possible in a modeling framework.</p>	<p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p><i>Supplemental material is necessary to fully address this standard.</i></p>
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Patterning & Algebraic Reasoning

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

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<p>A.PAR.8.1</p> <p>Interpret exponential expressions and parts of an exponential expression that represent a quantity in terms of its framework.</p>	<p>A1 M5 Lesson 8: Exponential Functions</p> <p>A1 M5 Lesson 16: Exponential Growth</p> <p>A1 M5 Lesson 17: Exponential Decay</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p>
<p>A.PAR.8.2</p> <p>Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

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<p>A.PAR.8.3</p> <p>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.</p>	<p>A1 M5 Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1)</p> <p>A1 M5 Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1)</p> <p>A1 M5 Lesson 14: Writing Equations for Exponential Functions from Tables or Graphs</p> <p>A1 M5 Lesson 16: Exponential Growth</p> <p>A1 M5 Lesson 17: Exponential Decay</p> <p>A1 M5 Lesson 18: Modeling Populations</p> <p>A1 M5 Lesson 21: World Population Prediction</p> <p>A1 M5 Lesson 22: A Closer Look at Populations</p> <p>A1 M5 Lesson 23: Modeling the Temperature of Objects Cooling Over Time</p> <p>A1 M5 Lesson 24: Modeling an Invasive Species Population</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p>
<p>A.PAR.8.4</p> <p>Represent constraints by exponential equations and interpret data points as possible or not possible in a modeling environment.</p>	<p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p> <p><i>Supplemental material is necessary to fully address this standard.</i></p>

Numerical Reasoning

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 <i>Eureka Math</i> ²
<p>A.NR.5.1</p> <p>Rewrite algebraic and numeric expressions involving radicals.</p>	<p>A1 M4 Lesson 17: Rewriting Square Roots</p> <p><i>Supplemental material is necessary to address algebraic expressions.</i></p>
<p>A.NR.5.2</p> <p>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.</p>	<p>A1 M4 Lesson 13: Using Square Roots to Solve Quadratic Equations</p> <p>A1 M4 Lesson 17: Rewriting Square Roots</p>

Data & Statistical Reasoning

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 <i>Eureka Math</i>²
<p>A.DSR.10.1</p> <p>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.</p>	<p>A1 M1 Lesson 19: Distributions and Their Shapes</p> <p>A1 M1 Lesson 20: Describing the Center of a Distribution</p> <p>A1 M1 Lesson 21: Using Center to Compare Data Distributions</p> <p>A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation</p> <p>A1 M1 Lesson 23: Estimating Variability in Data Distributions</p> <p>A1 M1 Lesson 24: Comparing Distributions of Univariate Data</p>
<p>A.DSR.10.2</p> <p>Interpret differences in shape, center, and variability of the distributions based on the investigation, accounting for possible effects of extreme data points (outliers).</p>	<p>A1 M1 Lesson 19: Distributions and Their Shapes</p> <p>A1 M1 Lesson 20: Describing the Center of a Distribution</p> <p>A1 M1 Lesson 21: Using Center to Compare Data Distributions</p> <p>A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation</p> <p>A1 M1 Lesson 23: Estimating Variability in Data Distributions</p> <p>A1 M1 Lesson 24: Comparing Distributions of Univariate Data</p>
<p>A.DSR.10.3</p> <p>Represent data on two quantitative variables on a scatter plot and describe how the variables are related.</p>	<p>A1 M2 Lesson 15: Relationships Between Quantitative Variables</p> <p>A1 M2 Lesson 17: Modeling Relationships with a Line</p> <p>A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data</p>

**Georgia's K–12
Mathematics Standards**

Aligned Components of *Eureka Math*²

<p>A.DSR.10.4</p> <p>Interpret the slope (predicted rate of change) and the intercept (constant term) of a linear model based on the investigation of the data.</p>	<p>A1 M2 Lesson 16: Using Lines to Model Bivariate Quantitative Data</p> <p>A1 M2 Lesson 17: Modeling Relationships with a Line</p> <p>A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data</p>
<p>A.DSR.10.5</p> <p>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.</p>	<p>A1 M2 Lesson 17: Modeling Relationships with a Line</p> <p>A1 M2 Lesson 18: Calculating and Analyzing Residuals</p> <p>A1 M2 Lesson 20: Interpreting Correlation</p> <p>A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data</p>
<p>A.DSR.10.6</p> <p>Decide which type of function is most appropriate by observing graphed data.</p>	<p>A1 M6 Lesson 1: Analyzing Paint Splatters</p> <p>A1 M6 Lesson 2: Using Residual Plots to Select Models for Data</p> <p>A1 M6 Lesson 3: Populations of US Cities</p>
<p>A.DSR.10.7</p> <p>Distinguish between correlation and causation.</p>	<p>A1 M2 Lesson 20: Interpreting Correlation</p> <p>A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data</p>

Data & Statistical Reasoning; Probabilistic Reasoning

G.DSR.11 Examine real-life situations presented in a two-way frequency table to calculate probabilities, to model categorical data, and to explain real-life phenomena.

Georgia's K–12 Mathematics Standards

Aligned Components of *Eureka Math*²

Georgia's K–12 Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
G.DSR.11.1 Construct and summarize categorical data for two categories in two-way frequency tables.	A1 M2 Lesson 22: Summarizing Bivariate Categorical Data with Two-Way Tables A1 M2 Lesson 23: Bivariate Categorical Data and Conditional Relative Frequency Tables A1 M2 Lesson 24: Conditional Relative Frequencies and Association