

ABOUT EUREKA MATH

Created by the nonprofit Great Minds, *Eureka Math* helps teachers deliver unparalleled math instruction that provides students with a deep understanding of 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

Eureka Math is the only curriculum found by [EdReports.org](https://www.edreports.org) to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. 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](https://www.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](https://www.greatminds.org/data).

FULL SUITE OF RESOURCES

As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at [greatminds.org/resources](https://www.greatminds.org/resources).

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

Florida Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards in Mathematics Correlation to *Eureka Math*[®]

GRADE 8 MATHEMATICS

The majority of the Grade 8 Florida B.E.S.T. Mathematics Standards are fully covered by the Grade 8 *Eureka Math* curriculum. A small number of standards from Algebraic Reasoning, Geometric Reasoning, and Data Analysis and Probability will require the use of *Eureka Math* content from another grade level. A detailed analysis of alignment is provided in the table below.

INDICATORS

-  **GREEN** indicates the Florida standard is addressed in *Eureka Math*.
-  **YELLOW** indicates the Florida standard may not be completely addressed in *Eureka Math*.
-  **RED** indicates the Florida standard is not addressed in *Eureka Math*.
-  **BLUE** indicates there is a discrepancy between the grade level at which this standard is addressed in Florida and in *Eureka Math*.

Strand	Benchmark	Aligned Components of <i>Eureka Math</i>
Number Sense and Operations	Standard: MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.	
	MA.8.NSO.1.1 Extend previous understanding of rational numbers to define irrational numbers within the real number system. Locate an approximate value of a numerical expression involving irrational numbers on a number line.	G8 M7 Topic B: Decimal Expansions of Numbers
	MA.8.NSO.1.2 Plot, order and compare rational and irrational numbers represented in various forms.	G8 M7 Lesson 13: Comparing Irrational Numbers
	MA.8.NSO.1.3 Extend previous understanding of the Laws of Exponents to include integer exponents. Apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to integer exponents and rational number bases, with procedural fluency.	G8 M1 Lesson 2: Multiplication of Numbers in Exponential Form G8 M1 Lesson 3: Numbers in Exponential Form Raised to a Power G8 M1 Lesson 4: Numbers Raised to the Zeroth Power G8 M1 Lesson 5: Negative Exponents and the Laws of Exponents
	MA.8.NSO.1.4 Express numbers in scientific notation to represent and approximate very large or very small quantities. Determine how many times larger or smaller one number is compared to a second number.	G8 M1 Lesson 9: Scientific Notation G8 M1 Lesson 10: Operations with Numbers in Scientific Notation

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	<p>MA.8.NSO.1.5</p> <p>Add, subtract, multiply and divide numbers expressed in scientific notation with procedural fluency.</p>	<p>G8 M1 Lesson 10: Operations with Numbers in Scientific Notation</p> <p>G8 M1 Lesson 11: Efficacy of Scientific Notation</p>
	<p>MA.8.NSO.1.6</p> <p>Solve real-world problems involving operations with numbers expressed in scientific notation.</p>	<p>G8 M1 Lesson 11: Efficacy of Scientific Notation</p> <p>G8 M1 Lesson 12: Choice of Unit</p> <p>G8 M1 Lesson 13: Comparison of Numbers Written in Scientific Notation and Interpreting Scientific Notation Using Technology</p>
	<p>MA.8.NSO.1.7</p> <p>Solve multi-step mathematical and real-world problems involving the order of operations with rational numbers, including exponents and radicals.</p>	<p>G8 M1 Lesson 10: Operations with Numbers in Scientific Notation</p> <p>G8 M8 Topic D: Applications of Radicals and Roots</p>
Algebraic Reasoning	<p>Standard: MA.8.AR.1 Generate equivalent algebraic expressions.</p>	
	<p>MA.8.AR.1.1</p> <p>Apply the Laws of Exponents to generate equivalent algebraic expressions, limited to integer exponents and monomial bases.</p>	<p>G8 M1 Topic A: Exponential Notation and Properties of Integer Exponents</p>

Strand	Benchmark	Aligned Components of <i>Eureka Math</i>
	<p>MA.8.AR.1.2</p> <p>Apply properties of operations to multiply two linear expressions with rational coefficients.</p>	<p>G8 M4 Lesson 1: Writing Equations Using Symbols</p> <p>G8 M4 Lesson 2: Linear and Nonlinear Expressions in x</p>
	<p>MA.8.AR.1.3</p> <p>Rewrite the sum of two algebraic expressions having a common monomial factor as a common factor multiplied by the sum of two algebraic expressions.</p>	<p>G8 M4 Lesson 8: Linear Equations in Disguise</p>
	<p>Standard: MA.8.AR.2 Solve multi-step one-variable equations and inequalities.</p>	
	<p>MA.8.AR.2.1</p> <p>Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides.</p>	<p>G8 M4 Topic A: Writing and Solving Linear Equations</p>
	<p>MA.8.AR.2.2</p> <p>Solve two-step linear inequalities in one variable and represent solutions algebraically and graphically.</p>	<p>G7 M3 Lesson 12: Properties of Inequalities</p> <p>G7 M3 Lesson 13: Inequalities</p> <p>G7 M3 Lesson 14: Solving Inequalities</p> <p>G7 M3 Lesson 15: Graphing Solutions to Inequalities</p>

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	<p>MA.8.AR.2.3</p> <p>Given an equation in the form of $x^2 = p$ and $x^3 = q$, where p is a whole number and q is an integer, determine the real solutions.</p>	<p>G8 M7 Lesson 2: Square Roots</p> <p>G8 M7 Lesson 3: Existence and Uniqueness of Square Roots and Cube Roots</p> <p>G8 M7 Lesson 4: Simplifying Square Roots</p>
<p>Standard: MA.8.AR.3 Extend understanding of proportional relationships to two-variable linear equations.</p>		
	<p>MA.8.AR.3.1</p> <p>Determine if a linear relationship is also a proportional relationship.</p>	<p>G8 M4 Lesson 10: A Critical Look at Proportional Relationships</p>
	<p>MA.8.AR.3.2</p> <p>Given a table, graph or written description of a linear relationship, determine the slope.</p>	<p>G8 M4 Topic C: Slope and Equations of Lines</p>
	<p>MA.8.AR.3.3</p> <p>Given a table, graph or written description of a linear relationship, write an equation in slope-intercept form.</p>	<p>G8 M4 Topic C: Slope and Equations of Lines</p>
	<p>MA.8.AR.3.4</p> <p>Given a mathematical or real-world context, graph a two-variable linear equation from a written description, a table or an equation in slope-intercept form.</p>	<p>G8 M4 Topic C: Slope and Equations of Lines</p>

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	<p>MA.8.AR.3.5</p> <p>Given a real-world context, determine and interpret the slope and y-intercept of a two-variable linear equation from a written description, a table, a graph or an equation in slope-intercept form.</p>	G8 M4 Topic C: Slope and Equations of Lines
	<p>Standard: MA.8.AR.4 Develop an understanding of two-variable systems of equations.</p>	
	<p>MA.8.AR.4.1</p> <p>Given a system of two linear equations and a specified set of possible solutions, determine which ordered pairs satisfy the system of linear equations.</p>	G8 M4 Topic D: Systems of Linear Equations and Their Solutions
	<p>MA.8.AR.4.2</p> <p>Given a system of two linear equations represented graphically on the same coordinate plane, determine whether there is one solution, no solution or infinitely many solutions.</p>	G8 M4 Topic D: Systems of Linear Equations and Their Solutions
	<p>MA.8.AR.4.3</p> <p>Given a mathematical or real-world context, solve systems of two linear equations by graphing.</p>	G8 M4 Topic D: Systems of Linear Equations and Their Solutions

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Functions	Standard: MA.8.F.1 Define, evaluate and compare functions.	
	MA.8.F.1.1 Given a set of ordered pairs, a table, a graph or mapping diagram, determine whether the relationship is a function. Identify the domain and range of the relation.	G8 M5 Lesson 1: The Concept of a Function G8 M5 Lesson 2: Formal Definition of a Function
	MA.8.F.1.2 Given a function defined by a graph or an equation, determine whether the function is a linear function. Given an input-output table, determine whether it could represent a linear function.	G8 M5 Lesson 3: Linear Functions and Proportionality
	MA.8.F.1.3 Analyze a real-world written description or graphical representation of a functional relationship between two quantities and identify where the function is increasing, decreasing or constant.	G8 M5 Lesson 6: Graphs of Linear Functions and Rate of Change G8 M5 Lesson 7: Comparing Linear Functions and Graphs
Geometric Reasoning	Standard: MA.8.GR.1 Develop an understanding of the Pythagorean Theorem and angle relationships involving triangles.	
	MA.8.GR.1.1 Apply the Pythagorean Theorem to solve mathematical and real-world problems involving unknown side lengths in right triangles.	G8 M7 Topic C: The Pythagorean Theorem

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	<p>MA.8.GR.1.2</p> <p>Apply the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points in a coordinate plane.</p>	<p>G8 M7 Topic C: The Pythagorean Theorem</p>
	<p>MA.8.GR.1.3</p> <p>Use the Triangle Inequality Theorem to determine if a triangle can be formed from a given set of sides. Use the converse of the Pythagorean Theorem to determine if a right triangle can be formed from a given set of sides.</p>	<p>G8 M3 Topic B: Similar Figures</p>
	<p>MA.8.GR.1.4</p> <p>Solve mathematical problems involving the relationships between supplementary, complementary, vertical or adjacent angles.</p>	<p>G7 M6 Lesson 1: Complementary and Supplementary Angles</p> <p>G7 M6 Lessons 2–4: Solving for Unknown Angles Using Equations</p>
	<p>MA.8.GR.1.5</p> <p>Solve problems involving the relationships of interior and exterior angles of a triangle.</p>	<p>G7 M6 Lesson 1: Complementary and Supplementary Angles</p> <p>G7 M6 Lessons 2–4: Solving for Unknown Angles Using Equations</p>
	<p>MA.8.GR.1.6</p> <p>Develop and use formulas for the sums of the interior angles of regular polygons by decomposing them into triangles.</p>	<p>G7 M6 Topic B: Constructing Triangles</p>

Strand

Benchmark

Aligned Components of *Eureka Math*

<p>Standard: MA.8.GR.2 Understand similarity and congruence using models and transformations.</p>		
<p>MA.8.GR.2.1</p> <p>Given a preimage and image generated by a single transformation, identify the transformation that describes the relationship.</p>		<p>G8 M2 Topic A: Definitions and Properties of the Basic Rigid Motions</p> <p>G8 M3 Topic B: Sequencing the Basic Rigid Motions</p>
<p>MA.8.GR.2.2</p> <p>Given a preimage and image generated by a single dilation, identify the scale factor that describes the relationship.</p>		<p>G8 M3 Lesson 1: What Lies Behind “Same Shape”?</p> <p>G8 M3 Lesson 2: Properties of Dilations</p> <p>G8 M3 Lesson 3: Examples of Dilations</p>
<p>MA.8.GR.2.3</p> <p>Describe and apply the effect of a single transformation on two-dimensional figures using coordinates and the coordinate plane.</p>		<p>G8 M3 Topic B: Sequencing the Basic Rigid Motions</p> <p>G8 M3 Topic A: Dilation</p>
<p>MA.8.GR.2.4</p> <p>Solve mathematical and real-world problems involving proportional relationships between similar triangles.</p>		<p>G8 M2 Topic B: Similar Figures</p>
<p>Standard: MA.7.GR.2 Solve problems involving three-dimensional figures, including right circular cylinders.</p>		
<p>MA.7.GR.2.1</p> <p>Given a mathematical or real-world context, find the surface area of a right circular cylinder using the figure’s net.</p>		<p>G7 M6 Topic D: Problems Involving Area and Surface Area</p>

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	<p>MA.7.GR.2.2</p> <p>Solve real-world problems involving surface area of right circular cylinders.</p>	G7 M6 Topic D: Problems Involving Area and Surface Area
	<p>MA.7.GR.2.3</p> <p>Solve mathematical and real-world problems involving volume of right circular cylinders.</p>	G7 M7 Topic E: Problems Involving Volume
Data Analysis and Probability	<p>Standard: MA.8.DP.1 Represent and investigate numerical bivariate data.</p>	
	<p>MA.8.DP.1.1</p> <p>Given a set of real-world bivariate numerical data, construct a scatter plot or a line graph as appropriate for the context.</p>	G8 M6 Topic B: Bivariate Numerical Data
	<p>MA.8.DP.1.2</p> <p>Given a scatter plot within a real-world context, describe patterns of association.</p>	G8 M6 Lesson 7: Patterns in Scatter Plots
	<p>MA.8.DP.1.3</p> <p>Given a scatter plot with a linear association, informally fit a straight line.</p>	G8 M6 Topic B: Bivariate Numerical Data
	<p>Standard: MA.8.DP.2 Represent and find probabilities of repeated experiments.</p>	
	<p>MA.8.DP.2.1</p> <p>Determine the sample space for a repeated experiment.</p>	G7 M5 Topic A: Calculating and Interpreting Probabilities

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	<p>MA.8.DP.2.2</p> <p>Find the theoretical probability of an event related to a repeated experiment.</p>	<p>G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities</p> <p>G7 M5 Lesson 9: Comparing Estimated Probabilities to Probabilities Predicted by a Mode</p>
	<p>MA.8.DP.2.3</p> <p>Solve real-world problems involving probabilities related to single or repeated experiments, including making predictions based on theoretical probability.</p>	<p>G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities</p> <p>G7 M5 Lesson 9: Comparing Estimated Probabilities to Probabilities Predicted by a Model</p> <p>G7 M5 Lessons 10–11: Conducting a Simulation to Estimate the Probability of an Event</p> <p>G7 M5 Lesson 12: Applying Probability to Make Informed Decisions</p>