
Grade 8 | Indiana Academic Standards for Mathematics Correlation to *Eureka Math*²®

When the original *Eureka Math*[®] curriculum was released, it quickly became the most widely used K–5 mathematics curriculum in the country. Now, the Great Minds[®] teacher–writers have created *Eureka Math*²®, a groundbreaking new curriculum that helps teachers deliver exponentially better math instruction while still providing students with the same deep understanding of and fluency in math. *Eureka Math*² carefully sequences mathematical content to maximize vertical alignment—a principle tested and proven to be essential in students’ mastery of math—from kindergarten through high school.

While this innovative new curriculum includes all the trademark *Eureka Math* aha moments that have been delighting students and teachers for years, it also boasts these exciting new features:

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 right into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the *Teach* book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, 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.

Digital Engagement

The digital elements of *Eureka Math*² add to students’ engagement with the math. The curriculum provides teachers with digital slides for each lesson. In addition, each grade level includes wordless videos that spark students’ interest and curiosity. Students at all levels work through mathematical explorations that help lead to their own mathematical discoveries. Digital lessons and videos provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

Mathematical Process Standards

Aligned Components of *Eureka Math*²

<p>PS.1</p> <p>Make sense of problems and persevere in solving them.</p>	<p>8 M2 Lesson 8: Sequencing the Rigid Motions</p> <p>8 M3 Lesson 10: Sequencing Transformations</p> <p>8 M4 Lesson 4: Using Linear Equations to Solve Problems</p> <p>8 M5 Lesson 5: Estimating Solutions</p> <p>8 M5 Lesson 7: The Substitution Method</p> <p>8 M5 Lesson 14: Back to the Coordinate Plane</p> <p>8 M6 Lesson 25: Applications of Volume</p>
<p>PS.2</p> <p>Reason abstractly and quantitatively.</p>	<p>8 M1 Lesson 18: The Pythagorean Theorem</p> <p>8 M1 Lesson 19: Using the Pythagorean Theorem</p> <p>8 M2 Lesson 21: Applying the Pythagorean Theorem</p> <p>8 M4 Lesson 10: Using Linear Equations to Solve Real-World Problems</p> <p>8 M5 Lesson 12: Solving Historical Problems with Systems of Equations</p> <p>8 M6 Lesson 2: Definition of a Function</p> <p>8 M6 Lesson 3: Linear Functions and Proportionality</p> <p>8 M6 Lesson 6: Linear Functions and Rate of Change</p> <p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 12: Patterns in Scatter Plots</p> <p>8 M6 Lesson 17: Analyzing the Model</p>

Mathematical Process Standards	Aligned Components of <i>Eureka Math</i> ²
<p>PS.3</p> <p>Construct viable arguments and critique the reasoning of others.</p>	<p>8 M1 Lesson 7: Making Sense of the Exponent of 0</p> <p>8 M1 Lesson 22: Familiar and Not So Familiar Numbers</p> <p>8 M2 Lesson 13: Angle Sum of a Triangle</p> <p>8 M2 Lesson 17: Proving the Pythagorean Theorem</p> <p>8 M2 Lesson 18: Proving the Converse of the Pythagorean Theorem</p> <p>8 M5 Lesson 10: Choosing a Solution Method</p> <p>8 M6 Lesson 10: Graphs of Nonlinear Functions</p> <p>8 M6 Lesson 13: Informally Fitting a Line to Data</p>
<p>PS.4</p> <p>Model with mathematics.</p>	<p>8 M2 Lesson 22: On the Right Path</p> <p>8 M3 Lesson 6: The Shadowy Hand</p> <p>8 M4 Lesson 11: Planning a Trip</p> <p>8 M5 Lesson 1: Solving Problems with Equations and Their Graphs</p> <p>8 M6 Lesson 16: Using the Investigative Process</p>
<p>PS.5</p> <p>Use appropriate tools strategically.</p>	<p>8 M1 Lesson 12: Operations with Numbers in Scientific Notation</p> <p>8 M2 Lesson 1: Motions of the Plane</p> <p>8 M3 Lesson 5: Figures and Dilations</p> <p>8 M6 Lesson 8: Comparing Functions</p>

Mathematical Process Standards**Aligned Components of *Eureka Math*²**

Mathematical Process Standards	Aligned Components of <i>Eureka Math</i> ²
PS.6 Attend to precision.	8 M1 Lesson 8: Making Sense of Integer Exponents 8 M1 Lesson 24: Revisiting Equations with Squares and Cubes 8 M2 Lesson 2: Translations 8 M2 Lesson 4: Translations and Reflections on the Coordinate Plane 8 M2 Lesson 5: Rotations 8 M2 Lesson 10: Congruent Figures 8 M2 Lesson 12: Lines Cut by a Transversal 8 M3 Lesson 2: Enlargements 8 M4 Lesson 2: Solving Linear Equations 8 M5 Lesson 2: Introduction to Systems of Linear Equations 8 M6 Lesson 5: Graphs of Functions and Equations 8 M6 Lesson 9: Increasing and Decreasing Functions 8 M6 Lesson 14: Determining an Equation of a Line Fit to Data 8 M6 Lesson 21: Volumes of Prisms and Pyramids 8 M6 Lesson 24: Volume of Spheres

Mathematical Process Standards**Aligned Components of *Eureka Math*²**

Mathematical Process Standards	Aligned Components of <i>Eureka Math</i> ²
<p>PS.7</p> <p>Look for and make use of structure.</p>	<p>8 M1 Lesson 2: Comparing Large Numbers</p> <p>8 M1 Lesson 9: Writing Equivalent Expressions</p> <p>8 M1 Lesson 23: Ordering Irrational Numbers</p> <p>8 M2 Lesson 15: Exterior Angles of Triangles</p> <p>8 M2 Lesson 19: Using the Pythagorean Theorem and Its Converse</p> <p>8 M3 Lesson 7: Dilations on a Grid</p> <p>8 M3 Lesson 16: Similar Right Triangles</p> <p>8 M4 Lesson 1: Equations</p> <p>8 M4 Lesson 3: Solving Linear Equations with Rational Coefficients</p> <p>8 M4 Lesson 7: Linear Equations with More Than One Solution</p> <p>8 M4 Lesson 8: Another Possible Number of Solutions</p> <p>8 M4 Lesson 9: Writing Linear Equations</p> <p>8 M5 Lesson 3: Identifying Solutions</p> <p>8 M5 Lesson 4: More Than One Solution</p> <p>8 M6 Lesson 4: More Examples of Functions</p> <p>8 M6 Lesson 15: Linear Models</p> <p>8 M6 Lesson 18: Bivariate Categorical Data</p> <p>8 M6 Lesson 23: Volume of Cones</p>

Mathematical Process Standards**Aligned Components of *Eureka Math*²**

Mathematical Process Standards	Aligned Components of <i>Eureka Math</i> ²
<p>PS.8</p> <p>Look for and express regularity in repeated reasoning.</p>	<p>8 M1 Lesson 6: More Properties of Exponents</p> <p>8 M1 Lesson 20: Square Roots</p> <p>8 M2 Lesson 3: Reflections</p> <p>8 M2 Lesson 6: Rotations on the Coordinate Plane</p> <p>8 M2 Lesson 7: Working Backward</p> <p>8 M2 Lesson 9: Ordering Sequences of Rigid Motions</p> <p>8 M3 Lesson 1: Exploring Dilations</p> <p>8 M3 Lesson 3: Reductions and More Enlargements</p> <p>8 M3 Lesson 4: Using Lined Paper to Explore Dilations</p> <p>8 M3 Lesson 8: Dilations on the Coordinate Plane</p> <p>8 M3 Lesson 9: Describing Dilations</p> <p>8 M3 Lesson 17: Similar Triangles on a Line</p> <p>8 M4 Lesson 5: An Interesting Application of Linear Equations, Part 1</p> <p>8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2</p> <p>8 M4 Lesson 12: Solutions to Linear Equations in Two Variables</p> <p>8 M6 Lesson 1: Motion and Speed</p> <p>8 M6 Lesson 22: Volume of Cylinders</p>

Number Sense

Students continue to deepen their understanding of rational and irrational numbers by explaining the differences between them and solving real-world problems.

Indiana Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>8.NS.1</p> <p>Give examples of rational and irrational numbers, and explain the difference between them. State decimal equivalents for any number. For rational numbers, show that the decimal equivalent terminates or repeats, and convert a repeating decimal into a rational number.</p>	<p>7 M2 Lesson 19: Rational Numbers as Decimals, Part 1</p> <p>7 M2 Lesson 20: Rational Numbers as Decimals, Part 2</p> <p>7 M2 Lesson 21: Comparing and Ordering Rational Numbers</p> <p>8 M1 Lesson 22: Familiar and Not So Familiar Numbers</p> <p>8 M4 Lesson 5: An Interesting Application of Linear Equations, Part 1</p> <p>8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2</p>
<p>8.NS.2</p> <p>Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.</p>	<p>8 M1 Lesson 21: Approximating Values of Roots and π^2</p> <p>8 M1 Lesson 23: Ordering Irrational Numbers</p>
<p>8.NS.3</p> <p>Given a numeric expression with common rational number bases and integer exponents, apply the properties of exponents to generate equivalent expressions. (E)</p>	<p>8 M1 Lesson 5: Products of Exponential Expressions with Whole-Number Exponents</p> <p>8 M1 Lesson 6: More Properties of Exponents</p> <p>8 M1 Lesson 7: Making Sense of the Exponent of 0</p> <p>8 M1 Lesson 8: Making Sense of Integer Exponents</p> <p>8 M1 Lesson 9: Writing Equivalent Expressions</p> <p>8 M1 Lesson 10: Evaluating Numerical Expressions by Using Properties of Exponents</p>

Indiana Academic Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.NS.4</p> <p>Solve real-world problems with rational numbers by using multiple operations. (E)</p>	<p>7 M2 Lesson 25: Writing and Evaluating Expressions with Rational Numbers, Part 1</p> <p>7 M2 Lesson 26: Writing and Evaluating Expressions with Rational Numbers, Part 2</p>
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Algebra and Functions

Students understand the formal definition of a function, analyze linear functions in multiple representations, and differentiate between linear and nonlinear functions. Students also solve a system of linear equations in two unknowns.

Indiana Academic Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.AF.1</p> <p>Solve linear equations and inequalities with rational number coefficients fluently, including those whose solutions require expanding expressions using the distributive property and collecting like terms. Represent real-world problems using linear equations and inequalities in one variable and solve such problems. (E)</p>	<p>8 M4 Lesson 1: Equations</p> <p>8 M4 Lesson 2: Solving Linear Equations</p> <p>8 M4 Lesson 3: Solving Linear Equations with Rational Coefficients</p> <p>8 M4 Lesson 4: Using Linear Equations to Solve Problems</p> <p>8 M4 Lesson 5: An Interesting Application of Linear Equations, Part 1</p> <p>8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2</p> <p>8 M4 Lesson 7: Linear Equations with More Than One Solution</p> <p>8 M4 Lesson 8: Another Possible Number of Solutions</p> <p>8 M4 Lesson 10: Using Linear Equations to Solve Real-World Problems</p> <p>8 M4 Lesson 11: Planning a Trip</p>
<p>8.AF.2</p> <p>Generate linear equations in one variable with one solution, infinitely many solutions, or no solutions. Justify the classification given.</p>	<p>8 M4 Lesson 7: Linear Equations with More Than One Solution</p> <p>8 M4 Lesson 8: Another Possible Number of Solutions</p> <p>8 M4 Lesson 9: Writing Linear Equations</p> <p>8 M4 Lesson 10: Using Linear Equations to Solve Real-World Problems</p>

**Indiana Academic Standards
for Mathematics**

Aligned Components of *Eureka Math*²

<p>8.AF.3</p> <p>Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x, y).</p>	<p>8 M6 Lesson 1: Motion and Speed</p> <p>8 M6 Lesson 2: Definition of a Function</p> <p>8 M6 Lesson 4: More Examples of Functions</p> <p>8 M6 Lesson 5: Graphs of Functions and Equations</p>
<p>8.AF.4</p> <p>Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described. (E)</p>	<p>8 M6 Lesson 9: Increasing and Decreasing Functions</p> <p>8 M6 Lesson 10: Graphs of Nonlinear Functions</p>
<p>8.AF.5</p> <p>Interpret the equation $y = mx + b$ as defining a linear function whose graph is a straight line; give examples of functions that are not linear. Describe similarities and differences between linear and nonlinear functions from tables, graphs, verbal descriptions, and equations.</p>	<p>8 M6 Lesson 3: Linear Functions and Proportionality</p> <p>8 M6 Lesson 6: Linear Functions and Rate of Change</p> <p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 8: Comparing Functions</p> <p>8 M6 Lesson 10: Graphs of Nonlinear Functions</p>

**Indiana Academic Standards
for Mathematics**

Aligned Components of *Eureka Math*²

<p>8.AF.6</p> <p>Construct a function to model a linear relationship between two quantities given a verbal description, table of values, or graph. Within the context of a problem, describe the meaning of m (rate of change) and b (y-intercept) in $y = mx + b$. (E)</p>	<p>8 M6 Lesson 6: Linear Functions and Rate of Change</p> <p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 25: Applications of Volume</p>
<p>8.AF.7</p> <p>Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).</p>	<p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 8: Comparing Functions</p>
<p>8.AF.8</p> <p>Approximate the solution of a system of equations by graphing and interpreting the reasonableness of the approximation. (E)</p>	<p>8 M5 Lesson 1: Solving Problems with Equations and Their Graphs</p> <p>8 M5 Lesson 2: Introduction to Systems of Linear Equations</p> <p>8 M5 Lesson 3: Identifying Solutions</p> <p>8 M5 Lesson 4: More Than One Solution</p> <p>8 M5 Lesson 5: Estimating Solutions</p> <p>8 M5 Lesson 7: The Substitution Method</p> <p>8 M5 Lesson 10: Choosing a Solution Method</p> <p>8 M5 Lesson 14: Back to the Coordinate Plane</p>

Geometry and Measurement

Students explore transformations in the coordinate plane and are also expected to understand and explain the Pythagorean Theorem, its converse, and to use this relationship to solve problems and find distance on the coordinate plane.

Indiana Academic Standards for Mathematics

Aligned Components of *Eureka Math*²

8.GM.1	8 M2 Lesson 1: Motions of the Plane
Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane. (E)	8 M2 Lesson 2: Translations
	8 M2 Lesson 3: Reflections
	8 M2 Lesson 4: Translations and Reflections on the Coordinate Plane
	8 M2 Lesson 5: Rotations
	8 M2 Lesson 6: Rotations on the Coordinate Plane
	8 M2 Lesson 7: Working Backward
	8 M2 Lesson 8: Sequencing the Rigid Motions
	8 M2 Lesson 9: Ordering Sequences of Rigid Motions
	8 M2 Lesson 10: Congruent Figures
	8 M2 Lesson 11: Showing Figures Are Congruent
	8 M2 Lesson 12: Lines Cut by a Transversal
	8 M3 Lesson 1: Exploring Dilations
	8 M3 Lesson 2: Enlargements
	8 M3 Lesson 3: Reductions and More Enlargements
	8 M3 Lesson 4: Using Lined Paper to Explore Dilations
	8 M3 Lesson 5: Figures and Dilations
	8 M3 Lesson 6: The Shadowy Hand
	8 M3 Lesson 7: Dilations on a Grid
	8 M3 Lesson 8: Dilations on the Coordinate Plane

**Indiana Academic Standards
for Mathematics**

Aligned Components of *Eureka Math*²

<p>8.GM.1 <i>continued</i></p>	<p>8 M3 Lesson 9: Describing Dilations 8 M3 Lesson 10: Sequencing Transformations 8 M3 Lesson 16: Similar Right Triangles</p>
<p>8.GM.2 Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres. (E)</p>	<p>8 M6 Lesson 21: Volumes of Prisms and Pyramids 8 M6 Lesson 22: Volume of Cylinders 8 M6 Lesson 23: Volume of Cones 8 M6 Lesson 24: Volume of Spheres 8 M6 Lesson 25: Applications of Volume</p>
<p>8.GM.3 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and other mathematical problems in two dimensions. (E)</p>	<p>8 M1 Lesson 18: The Pythagorean Theorem 8 M1 Lesson 19: Using the Pythagorean Theorem 8 M1 Lesson 20: Square Roots 8 M2 Lesson 17: Proving the Pythagorean Theorem 8 M2 Lesson 18: Proving the Converse of the Pythagorean Theorem 8 M2 Lesson 19: Using the Pythagorean Theorem and Its Converse 8 M2 Lesson 21: Applying the Pythagorean Theorem 8 M2 Lesson 22: On the Right Path 8 M3 Lesson 16: Similar Right Triangles</p>

Data Analysis, Statistics, and Probability

Students begin to investigate and represent bivariate data using scatter plots. They build on their experience with univariate data. Students also build on the probability work in grade seven to examine and represent the probability and compound events.

Indiana Academic Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>8.DSP.1</p> <p>Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</p>	<p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 12: Patterns in Scatter Plots</p>
<p>8.DSP.2</p> <p>Write and use equations that model linear relationships to make predictions, including interpolation and extrapolation, in real-world situations involving bivariate measurement data. Interpret the slope and y-intercept in context. (E)</p>	<p>8 M6 Lesson 6: Linear Functions and Rate of Change</p> <p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 13: Informally Fitting a Line to Data</p> <p>8 M6 Lesson 14: Determining an Equation of a Line Fit to Data</p> <p>8 M6 Lesson 15: Linear Models</p> <p>8 M6 Lesson 16: Using the Investigative Process</p> <p>8 M6 Lesson 17: Analyzing the Model</p>
<p>8.DSP.3</p> <p>Represent sample spaces and find probabilities of compound events (independent and dependent) using organized lists, tables, and tree diagrams. (E)</p>	<p>7 M6 Lesson 5: Multistage Experiments</p>

**Indiana Academic Standards
for Mathematics**

Aligned Components of *Eureka Math*²

<p>8.DSP.4</p> <p>Define the probability of a compound event, just as with simple events, as the fraction of outcomes in the sample space for which the compound event occurs. Use appropriate terminology to describe independent, dependent, complementary, and mutually exclusive events. (E)</p>	<p>7 M6 Lesson 5: Multistage Experiments</p>
<p>8.DSP.5</p> <p>For events with a large number of outcomes, understand the use of the multiplication counting principle. Develop the multiplication counting principle, and apply it to situations with a large number of outcomes.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Integrated STEM

Communication and Collaboration

Indiana Academic Standards: Integrated STEM

Aligned Components of *Eureka Math*²

<p>8.CC.1</p> <p>Collect and document evidence to share information with others in multiple media forms.</p>	<p>8 M1 Lesson 6: More Properties of Exponents</p> <p>8 M1 Lesson 13: Applications with Numbers in Scientific Notation</p> <p>8 M1 Lesson 18: The Pythagorean Theorem</p> <p>8 M1 Lesson 21: Approximating Values of Roots and π^2</p> <p>8 M2 Lesson 4: Translations and Reflections on the Coordinate Plane</p> <p>8 M2 Lesson 8: Sequencing the Rigid Motions</p> <p>8 M2 Lesson 13: Angle Sum of a Triangle</p> <p>8 M2 Lesson 17: Proving the Pythagorean Theorem</p> <p>8 M2 Lesson 18: Proving the Converse of the Pythagorean Theorem</p> <p>8 M3 Lesson 1: Exploring Dilations</p> <p>8 M3 Lesson 9: Describing Dilations</p> <p>8 M3 Lesson 17: Similar Triangles on a Line</p> <p>8 M4 Lesson 11: Planning a Trip</p> <p>8 M4 Lesson 12: Solutions to Linear Equations in Two Variables</p> <p>8 M4 Lesson 24: The Patterns, the Pops, and the Pastries</p> <p>8 M5 Lesson 2: Introduction to Systems of Linear Equations</p> <p>8 M5 Lesson 12: Solving Historical Problems with Systems of Equations</p> <p>8 M6 Lesson 1: Motion and Speed</p> <p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 22: Volume of Cylinders</p>

**Indiana Academic Standards:
Integrated STEM**

Aligned Components of *Eureka Math*²

<p>8.CC.2</p> <p>Communicate the solution(s) of a problem/analysis either orally, visually, or in writing, including process steps, findings, or conclusions.</p>	<p>8 M1 Lesson 1: Large and Small Positive Numbers</p> <p>8 M1 Lesson 2: Comparing Large Numbers</p> <p>8 M1 Lesson 3: Time to be More Precise—Scientific Notation</p> <p>8 M1 Lesson 5: Products of Exponential Expressions with Whole-Number Exponents</p> <p>8 M1 Lesson 7: Making Sense of the Exponent of 0</p>
<p>8.CC.3</p> <p>Identify, implement, and assign roles and responsibilities to collaborate in various group settings (i.e., online, onsite and/or hybrid) and situations.</p>	<p>8 M1 Lesson 19: Using the Pythagorean Theorem</p> <p>8 M2 Lesson 2: Translations</p> <p>8 M2 Lesson 15: Exterior Angles of Triangles</p> <p>8 M3 Lesson 6: The Shadowy Hand</p> <p>8 M6 Lesson 10: Graphs of Nonlinear Functions</p>
<p>8.CC.4</p> <p>Communicate specific constraints and criteria established for an investigation.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.CC.5</p> <p>Evaluate competing solutions or arguments in a systematic way based on qualitative and/or quantitative evidence.</p>	<p>8 M1 Lesson 12: Operations with Numbers in Scientific Notation</p> <p>8 M1 Lesson 24: Revisiting Equations with Squares and Cubes</p> <p>8 M2 Lesson 6: Rotations on the Coordinate Plane</p> <p>8 M3 Lesson 14: Using Similar Figures to Find Unknown Side Lengths</p> <p>8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2</p>

Integrated STEM

Data Analysis and Measurement

Indiana Academic Standards: Integrated STEM	Aligned Components of <i>Eureka Math</i> ²
<p>8.DM.1</p> <p>Use multiple systems of measurement (i.e., standard and metric) and data sets (e.g., plots, tables, graphs, charts) defined in grade level content standards to analyze real-world scenarios and the mathematical relationships represented by the data.</p>	<p>8 M1 Lesson 1: Large and Small Positive Numbers</p> <p>8 M1 Lesson 12: Operations with Numbers in Scientific Notation</p> <p>8 M1 Lesson 13: Applications with Numbers in Scientific Notation</p> <p>8 M1 Lesson 14: Choosing Units of Measurement</p> <p>8 M2 Lesson 21: Applying the Pythagorean Theorem</p>
<p>8.DM.2</p> <p>Construct visual representations (e.g., bar graphs, charts) to determine patterns or statistical analysis (e.g., mean, median) defined in grade level content standards.</p>	<p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 12: Patterns in Scatter Plots</p> <p>8 M6 Lesson 13: Informally Fitting a Line to Data</p> <p>8 M6 Lesson 14: Determining an Equation of a Line Fit to Data</p> <p>8 M6 Lesson 15: Linear Models</p>
<p>8.DM.3</p> <p>Use approximations and evaluate reasonableness of observations, results, and solutions throughout processes.</p>	<p>8 M1 Lesson 2: Comparing Large Numbers</p> <p>8 M1 Lesson 15: Get to the Point</p> <p>8 M2 Lesson 21: Applying the Pythagorean Theorem</p> <p>8 M3 Lesson 6: The Shadowy Hand</p> <p>8 M6 Lesson 22: Volume of Cylinders</p>
<p>8.DM.4</p> <p>Choose data sets and analysis methods to support the inquiry process.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

Integrated STEM

Inquiry-Based Approaches and Problem Solving

Indiana Academic Standards: Integrated STEM	Aligned Components of <i>Eureka Math</i> ²
<p>8.IPS.1</p> <p>Conduct or extend an original investigation, analyze results, iterate, and revise to improve the design.</p>	<p>8 M1 Lesson 13: Applications with Numbers in Scientific Notation</p> <p>8 M1 Lesson 14: Choosing Units of Measurement</p> <p>8 M1 Lesson 15: Get to the Point</p> <p>8 M2 Lesson 21: Applying the Pythagorean Theorem</p> <p>8 M2 Lesson 22: On the Right Path</p> <p>8 M3 Lesson 6: The Shadowy Hand</p> <p>8 M4 Lesson 11: Planning a Trip</p> <p>8 M5 Lesson 1: Solving Problems with Equations and Their Graphs</p> <p>8 M6 Lesson 16: Using the Investigative Process</p> <p>8 M6 Lesson 17: Analyzing the Model</p>
<p>8.IPS.2</p> <p>Determine one or more viable solutions using data and information to resolve a scenario given criteria and constraints.</p>	<p>8 M1 Lesson 13: Applications with Numbers in Scientific Notation</p> <p>8 M1 Lesson 14: Choosing Units of Measurement</p> <p>8 M1 Lesson 15: Get to the Point</p> <p>8 M2 Lesson 21: Applying the Pythagorean Theorem</p> <p>8 M2 Lesson 22: On the Right Path</p> <p>8 M3 Lesson 6: The Shadowy Hand</p> <p>8 M4 Lesson 11: Planning a Trip</p> <p>8 M5 Lesson 1: Solving Problems with Equations and Their Graphs</p> <p>8 M6 Lesson 16: Using the Investigative Process</p> <p>8 M6 Lesson 17: Analyzing the Model</p>

**Indiana Academic Standards:
Integrated STEM**

Aligned Components of *Eureka Math*²

<p>8.IPS.3</p> <p>Integrate processes and methodologies across disciplines based on content specific standards to incorporate multiple sources of evidence to support defining a solution.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
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**Integrated STEM
Applications and Modeling**

**Indiana Academic Standards:
Integrated STEM**

Aligned Components of *Eureka Math*²

<p>8.AM.1</p> <p>Interpret and evaluate relationships among sets of data (e.g., distance-time graph).</p>	<p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 12: Patterns in Scatter Plots</p> <p>8 M6 Lesson 13: Informally Fitting a Line to Data</p> <p>8 M6 Lesson 14: Determining an Equation of a Line Fit to Data</p> <p>8 M6 Lesson 15: Linear Models</p>
<p>8.AM.2</p> <p>Use coordinate planes or number lines to examine information and represent solutions.</p>	<p>8 M5 Lesson 1: Solving Problems with Equations and Their Graphs</p> <p>8 M6 Lesson 4: More Examples of Functions</p> <p>8 M6 Lesson 5: Graphs of Functions and Equations</p> <p>8 M6 Lesson 7: Interpreting Rate of Change and Initial Value</p> <p>8 M6 Lesson 8: Comparing Functions</p>

**Indiana Academic Standards:
Integrated STEM**

Aligned Components of *Eureka Math*²

<p>8.AM.3</p> <p>Use models to compare and contrast different systems and explain the factors that influence them.</p>	<p>8 M6 Lesson 11: Scatter Plots</p> <p>8 M6 Lesson 12: Patterns in Scatter Plots</p> <p>8 M6 Lesson 18: Bivariate Categorical Data</p> <p>8 M6 Lesson 19: Association in Bivariate Categorical Data</p> <p>8 M6 Lesson 20: Analyzing Bivariate Categorical Data</p>
<p>8.AM.4</p> <p>Use and revise models to describe, test, and predict phenomena or solutions.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

**Integrated STEM
Information and Digital Literacy**

**Indiana Academic Standards:
Integrated STEM**

Aligned Components of *Eureka Math*²

<p>8.IDL.1</p> <p>Identify and evaluate the impact of technology when selecting tools to solve a problem in order to determine the most effective solution.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.IDL.2</p> <p>Review and compile information from multiple sources to solve a problem.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>8.IDL.3</p> <p>Describe how solutions or technologies are adapted to meet the changing needs and wants of individuals or communities.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>