EUREKA MATH™

GREAT MINDS

ABOUT *EUREKA MATH*	Created by the nonprofit Great Minds, *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** | *Eureka Math* is the only curriculum found by 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 which 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** | As a nonprofit, 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

GRADE 7 MATHEMATICS

The majority of the Grade 7 Nebraska Mathematics Standards are fully covered by the Grade 7 *Eureka Math* curriculum. The primary areas where the Grade 7 Nebraska Mathematics Standards and Grade 7 *Eureka Math* do not align are in the categories of Algebra and Data. Standards from these categories will require the use of supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, *Eureka Math* can ensure students are successful in achieving the proficiencies of the Nebraska Mathematics Standards while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

Green indicates that the Nebraska standard is fully addressed in *Eureka Math*.

Yellow indicates that the Nebraska standard may not be completely addressed in *Eureka Math*.

Red indicates that the Nebraska standard is not addressed in *Eureka Math*.

Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Nebraska standards and in *Eureka Math*.

Mathematical Processes	Aligned Components of *Eureka Math*
1: Solves mathematical problems. Through the use of appropriate academic and technical tools, students will make sense of mathematical problems and persevere in solving them. Students will draw upon their prior knowledge in order to employ critical thinking skills, reasoning skills, creativity, and innovative ability. Additionally, students will compute accurately and determine the reasonableness of solutions.	Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 1, 2, and 5, which are specifically addressed in the following modules: G7 M1: Ratios and Proportional Relationships G7 M2: Rational Numbers G7 M3: Expressions and Equations G7 M4: Percent and Proportional Relationships G7 M5: Statistics and Probability G7 M6: Geometry
2: Models and represents mathematical problems. Students will analyze relationships in order to create mathematical models given a real-world situation or scenario. Conversely, students will describe situations or scenarios given a mathematical model.	Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules: G7 M1: Ratios and Proportional Relationships G7 M2: Rational Numbers G7 M3: Expressions and Equations G7 M5: Statistics and Probability

Mathematical Processes	Aligned Components of *Eureka Math*
3: Communicates mathematical ideas effectively. Students will communicate mathematical ideas effectively and precisely. Students will critique the reasoning of others as well as provide mathematical justifications. Students will utilize appropriate communication approaches individually and collectively and through multiple methods, including writing, speaking, and listening.	Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 3 and 6, which are specifically addressed in the following modules: G7 M2: Rational Numbers G7 M3: Expressions and Equations G7 M4: Percent and Proportional Relationships G7 M5: Statistics and Probability G7 M6: Geometry
4: Makes mathematical connections. Students will connect mathematical knowledge, ideas, and skills beyond the math classroom. This includes the connection of mathematical ideas to other topics within mathematics and to other content areas. Additionally, students will be able to describe the connection of mathematical knowledge and skills to their career interest as well as within authentic/real-world contexts.	Lessons in every module engage students in modeling with mathematics as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 7 and 8, which are specifically addressed in the following modules: G7 M2: Rational Numbers G7 M3: Expressions and Equations G7 M4: Percent and Proportional Relationships G7 M6: Geometry

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Number	**Operations: Students will compute with rational numbers accurately.**	
	MA 7.1.2.a Solve problems using proportions and ratios (e.g., cross products, percents, tables, equations, and graphs).	G7 M1: Ratios and Proportional Relationships
	MA 7.1.2.b Add, subtract, multiply, and divide rational numbers (e.g., positive and negative fractions, decimals, and integers).	G7 M2 Topic A: Addition and Subtraction of Integers and Rational Numbers G7 M2 Topic B: Multiplication and Division of Integers and Rational Numbers
	MA 7.1.2.c Apply properties of operations as strategies for problem solving with rational numbers.	G7 M2 Lessons 8–9: Applying the Properties of Operations to Add and Subtract Rational Numbers G7 M2 Lesson 16: Applying the Properties of Operations to Multiply and Divide Rational Numbers
	MA 7.1.2.d Use multiple strategies to add, subtract, multiply, and divide integers.	G7 M2 Topic A: Addition and Subtraction of Integers and Rational Numbers G7 M2 Topic B: Multiplication and Division of Integers and Rational Numbers
	MA 7.1.2.e Estimate and check reasonableness of answers using appropriate strategies and tools.	G7 M1: Ratios and Proportional Relationships G7 M2: Rational Numbers G7 M3: Expressions and Equations G7 M4: Percent and Proportional Relationships G7 M6: Geometry

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Algebra	**Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions, equations, and inequalities.**	
	MA 7.2.1.a Describe and create an inequality from words and pictures (e.g., one-step, one-variable).	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities
	MA 7.2.1.b Represent real-world situations with proportions.	G7 M1: Ratios and Proportional Relationships
	Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.	
	MA 7.2.2.a Solve equations using the distributive property and combining like terms.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M2 Lessons 22–23: Solving Equations Using Algebra G7 M3 Topic B: Solve Problems Using Expressions, Equations, and Inequalities G7 M4 Lesson 10: Simple Interest G7 M4 Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications G7 M4 Lesson 17: Mixture Problems

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	MA 7.2.2.b Use factoring and properties of operations to create equivalent algebraic expressions (e.g., $2x + 6 = 2(x + 3)$).	G7 M3 Topic A: Use Properties of Operations to Generate Equivalent Expressions
	MA 7.2.2.c Given the value of the variable(s), evaluate algebraic expressions (including absolute value).	G7 M3 Topic A: Use Properties of Operations to Generate Equivalent Expressions Note: Supplemental material is necessary to address absolute value expressions.
	MA 7.2.2.d Solve two-step equations involving rational numbers which include the integers.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M2 Lessons 22–23: Solving Equations Using Algebra G7 M3 Topic B: Solve Problems Using Expressions, Equations, and Inequalities G7 M4 Lesson 10: Simple Interest G7 M4 Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications G7 M4 Lesson 17: Mixture Problems
	MA 7.2.2.e Solve one-step inequalities involving integers and rational numbers and represent solutions on a number line.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	Applications: Students will solve real-world problems involving expressions, equations, and inequalities.	
	MA 7.2.3.a Describe and write linear equations from words and tables.	G7 M1 Lesson 2: Proportional Relationships G7 M1 Topic B: Unit Rate and the Constant of Proportionality G7 M1 Lesson 14: Multi-Step Ratio Problems G7 M3 Topic B: Solve Problems Using Expressions, Equations, and Inequalities G7 M4: Percent and Proportional Relationships
	MA 7.2.3.b Write a two-step equation to represent real-world problems involving rational numbers in any form.	G7 M2 Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions G7 M2 Lessons 22–23: Solving Equations Using Algebra G7 M3 Topic B: Solve Problems Using Expressions, Equations, and Inequalities
	MA 7.2.3.c Solve real-world problems with equations that involve rational numbers in any form.	G7 M3 Topic B: Solve Problems Using Expressions, Equations, and Inequalities
	MA 7.2.3.d Solve real-world problems with inequalities.	G7 M3 Lesson 12: Properties of Inequalities G7 M3 Lesson 13: Inequalities G7 M3 Lesson 14: Solving Inequalities G7 M3 Lesson 15: Graphing Solutions to Inequalities

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	MA 7.2.3.e Use proportional relationships to solve real-world problems, including percent problems, (e.g., % increase, % decrease, mark-up, tip, simple interest).	G7 M4: Percent and Proportional Relationships
	MA 7.2.3.f Solve real-world problems involving scale drawings using a proportional relationship.	G7 M1 Topic D: Ratios of Scale Drawings G7 M4 Topic C: Scale Drawings
Geometry	**Characteristics: Students will identify and describe geometric characteristics of two-dimensional shapes.**	
	MA 7.3.1.a Apply and use properties of adjacent, complementary, supplementary, and vertical angles to find missing angle measures.	G7 M3 Lessons 10–11: Angle Problems and Solving Equations G7 M6 Topic A: Unknown Angles
	MA 7.3.1.b Draw triangles (freehand, using a ruler and a protractor, and using technology) with given conditions of three measures of angles or sides, and notice when the conditions determine a unique triangle, more than one triangle, or no triangle.	G7 M6 Topic B: Constructing Triangles

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	Measurement: Students will perform and compare measurements and apply formulas.	
	MA 7.3.3.a Solve real-world problems involving perimeter and area of composite shapes made from triangles, quadrilaterals and polygons.	G7 M3 Lesson 19: Unknown Area Problems on the Coordinate Plane G7 M3 Lesson 20: Composite Area Problems G7 M6 Topic D: Problems Involving Area and Surface Area
	MA 7.3.3.b Solve real-world problems involving surface area and volume of composite shapes made from rectangular and triangular prisms.	G7 M3 Topic C: Use Equations and Inequalities to Solve Geometry Problems G7 M6 Topic D: Problems Involving Area and Surface Area G7 M6 Topic E: Problems Involving Volume
	MA 7.3.3.c Determine the area and circumference of circles both on and off the coordinate plane.	G7 M3 Topic C: Use Equations and Inequalities to Solve Geometry Problems G7 M6 Topic D: Problems Involving Area and Surface Area
Data	**Representations: Students will create displays that represent data.**	
	MA 7.4.1.a Represent data using circle graphs.	*Eureka Math* does not address circle graphs.
	Analysis & Applications: Students will analyze data to address the situation.	
	MA 7.4.2.a Solve problems using information presented in circle graphs.	*Eureka Math* does not address circle graphs.

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	MA 7.4.2.b Explain the difference between a population and a sample.	G7 M5 Lesson 13: Populations, Samples, and Generalizing from a Sample to a Population
	MA 7.4.2.c Generate conclusions about a population based upon a random sample.	G7 M5 Topic C: Random Sampling and Estimating Population Characteristics
	MA 7.4.2.d Determine and critique biases in different data representations.	G7 M5 Topic C: Random Sampling and Estimating Population Characteristics
Probability: Students will interpret and apply concepts of probability.		
	MA 7.4.3.a Generate a list of possible outcomes for a simple event.	G7 M5 Lesson 3: Chance Experiments with Equally Likely Outcomes
	MA 7.4.3.b Describe the theoretical probability of an event using a fraction, percentage, and decimal.	G7 M5: Statistics and Probability
	MA 7.4.3.c Find theoretical probabilities for independent events.	G7 M5: Statistics and Probability
	MA 7.4.3.d Perform simple experiments and express the degree of likelihood (possible, impossible, certain, more likely, equally likely, or less likely); write as fractions and percentages.	G7 M5 Lesson 1: Chance Experiments

Category	Mathematics Standards		Aligned Components of *Eureka Math*
	MA 7.4.3.e Find experimental probability for independent events.		G7 M5 Topic A: Calculating and Interpreting Probabilities
	MA 7.4.3.f Compare and contrast theoretical and experimental probabilities.		G7 M5 Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities
	MA 7.4.3.g Find the probability of dependent compound events.		G7 M5 Lesson 6: Using Tree Diagrams to Represent a Sample Space and to Calculate Probabilities G7 M5 Lesson 7: Calculating Probabilities of Compound Events G7 M5 Lessons 10–11: Conducting a Simulation to Estimate the Probability of an Event
	MA 7.4.3.h Identify complementary events and calculate their probabilities.		G7 M5 Topic A: Calculating and Interpreting Probabilities