Algebra I | Oklahoma Academic Standards for Mathematics (2022) Correlation to *Eureka Math²® (2027)*

Eureka Math² 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 Math²* 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 Math² 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 Math² 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 Math² 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 Math²* 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 Math² 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.

Mathematical Actions and Processes	Aligned Components of *Eureka Math²*
Develop a Deep and Flexible Conceptual Understanding	Lessons in every module engage students in mathematical actions and processes.
Develop Accurate and Appropriate Procedural Fluency	Lessons in every module engage students in mathematical actions and processes.
Develop Strategies for Problem Solving	Lessons in every module engage students in mathematical actions and processes.
Develop Mathematical Reasoning	Lessons in every module engage students in mathematical actions and processes.
Develop a Productive Mathematical Disposition	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Make Conjectures, Model, and Generalize	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Communicate Mathematically	Lessons in every module engage students in mathematical actions and processes.

Numbers & Operations

A1.N.1 Extend the understanding of exponents to include square roots and cube roots.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.N.1.1 Write square roots and cube roots of constants and monomial algebraic expressions in simplest radical form.	A1 M4 Lesson 17: Rewriting Square Roots *Supplemental material is necessary to fully address this objective.*
A1.N.1.2 Add, subtract, multiply, divide, and simplify square roots of constants, rationalizing the denominator when necessary.	A1 M4 Lesson 17: Rewriting Square Roots *Supplemental material is necessary to fully address this objective.*

Algebraic Reasoning & Algebra

A1.A.1 Represent and solve mathematical and real-world problems using linear equations, absolute value equations, and systems of equations; interpret solutions in the original context.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.1.1 Use knowledge of solving equations with rational values to represent, use and apply mathematical models (e.g., angle measures, geometric formulas, dimensional analysis, Pythagorean theorem, science, statistics) and interpret the solutions in the original context.	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

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.1.2 Solve absolute value equations and interpret the solutions in the original context.	A1 M1 Lesson 14: Solution Sets of Compound Statements A1 M1 Lesson 15: Solving and Graphing Compound Inequalities A1 M1 Lesson 16: Solving Absolute Value Equations A1 M1 Lesson 17: Absolute Value Inequalities Al M1 Lesson 18: Applying Absolute Value
A1.A.1.3 Analyze, use and apply mathematical models to solve problems involving systems of linear equations with a maximum of two variables by graphing, substitution, and elimination. Graphing calculators or other appropriate technology may be utilized. Interpret the solutions in the original context.	A1 M2 Lesson 7: Low-Flow Showerhead A1 M2 Lesson 8: Systems of Linear Equations in Two Variables A1 M2 Lesson 9: A New Way to Solve Systems A1 M2 Lesson 10: The Elimination Method A1 M2 Lesson 11: Applications of Systems of Equations

Algebraic Reasoning & Algebra

A1.A.2 Represent and solve real-world and mathematical problems using linear inequalities and compound inequalities; interpret solutions in the original context.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.2.1 Represent relationships using mathematical models with linear inequalities; solve the resulting inequalities, graph on a coordinate plane, and interpret the solutions.	A1 M2 Lesson 4: Solution Sets of Linear Inequalities in Two Variables A1 M2 Lesson 5: Graphing Linear Inequalities in Two Variables A1 M2 Lesson 12: Solution Sets of Systems of Linear Inequalities A1 M2 Lesson 13: Graphing Solution Sets of Systems of Linear Inequalities A1 M2 Lesson 14: Applications of Systems of Linear Inequalities
A1.A.2.2 Represent relationships using mathematical models with compound and absolute value inequalities and solve the resulting inequalities by graphing and interpreting the solutions on a number line.	A1 M1 Lesson 14: Solution Sets of Compound Statements A1 M1 Lesson 15: Solving and Graphing Compound Inequalities A1 M1 Lesson 16: Solving Absolute Value Equations A1 M1 Lesson 17: Solving Absolute Value Inequalities A1 M1 Lesson 18: Applying Absolute Value

Algebraic Reasoning & Algebra

A1.A.3 Create and evaluate equivalent algebraic expressions and equations using algebraic properties.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.3.1 Solve equations involving several variables for one variable in terms of the others.	A1 M1 Lesson 12: Rearranging Formulas

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.3.2 Simplify polynomial expressions by adding, subtracting, or multiplying.	A1 M1 Lesson 3: Polynomial Expressions A1 M1 Lesson 4: Adding and Subtracting Polynomial Expressions A1 M1 Lesson 5: Multiplying Polynomial Expressions A1 M1 Lesson 6: Polynomial Identities
A1.A.3.3 Factor common monomial factors from polynomial expressions and factor quadratic expressions with a leading coefficient of 1.	A1 M1 Lesson 2: The Commutative, Associative, and Distributive Properties A1 M1 Lesson 6: Polynomial Identities A1 M4 Lesson 5: Solving Equations That Contain Factored Expressions A1 M4 Lesson 6: Solving Quadratic Equations by Factoring: Identities and Guess and Check A1 M4 Lesson 7: Solving Quadratic Equations by Factoring: Splitting the Linear Term A1 M4 Lesson 8: A Summary of Solving Quadratic Equations by Factoring A1 M4 Lesson 9: Creating and Solving Quadratic Equations in One Variable A1 M4 Lesson 10: Zeros of Functions A1 M4 Lesson 11: Graphing Quadratic Functions from Factored Form A1 M4 Lesson 12: Using Symmetry to Graph Quadratic Functions from Standard Form
A1.A.3.4 Evaluate linear, absolute value, rational, and radical expressions. Include applying a nonstandard operation such as $x \odot y = 2x + y$.	A1 M1 Lesson 2: The Commutative, Associative, and Distributive Properties A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions A1 M3 Lesson 3: The Graph of a Function A1 M3 Lesson 4: The Graph of the Equation $y = f(x)$ A1 M3 Lesson 16: The Absolute Value Function *Supplemental material is necessary to address nonstandard operations.*

Algebraic Reasoning & Algebra

A1.A.4 Analyze real-world and mathematical problems involving linear equations.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.4.1 Analyze, use and apply mathematical models and other data sets (e.g., graphs, equations, two points, a set of data points) to calculate and interpret slope and the x- and y-intercepts of a line.	8 M4 Lesson 13: The Graph of a Linear Equation in Two Variables 8 M4 Lesson 15: Comparing Proportional Relationships 8 M4 Lesson 16: Proportional Relationships and Slope 8 M4 Lesson 17: Slopes of Rising Lines 8 M4 Lesson 18: Slopes of Falling Lines 8 M4 Lesson 19: Using Coordinates to Find Slope A1 M2 Lesson 2: Graphing Linear Equations in Two Variables
A1.A.4.2 Analyze and interpret mathematical models involving lines that are parallel, perpendicular, horizontal, and vertical.	8 M4 Lesson 14: Lines with Special Characteristics 8 M4 Lesson 23: Slope and Parallel Lines *Supplemental material is necessary to address perpendicular lines.*
A1.A.4.3 Write the equation of the line given its slope and y-intercept, slope and one point, two points, x- and y-intercepts, or a set of data points.	A1 M2 Lesson 2: Graphing Linear Equations in Two Variables A1 M2 Lesson 3: Creating Linear Equations in Two Variables A1 M2 Lesson 6: Applications of Linear Equations and Inequalities

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.4.4 Express linear equations in slope-intercept, point-slope, and standard forms. Convert between these forms.	8 M4 Lesson 20: Slope-Intercept Form of the Equation of a Line 8 M4 Lesson 21: Slope and Parallel Lines 8 M4 Lesson 22: Point-Slope Form of the Equation of a Line 8 M4 Lesson 23: Comparing Equations in Different Forms 8 M4 Lesson 24: The Patterns, the Pops, and the Pastries 8 M4 Lesson 25: Lines, Lines, and More Lines 8 M4 Lesson 26: Linear Equations from Word Problems 8 M4 Lesson 27: Get to Work A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables A1 M2 Lesson 2: Graphing Linear Equations in Two Variables
A1.A.4.5 Analyze and interpret associations between graphical representations and written scenarios.	A1 M3 Lesson 8: Exploring Key Features of a Function and Its Graph A1 M3 Lesson 9: Identifying Key Features of a Function and Its Graph

Functions

A1.F.1 Understand functions as descriptions of covariation (how related quantities vary together) in real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.1.1 Distinguish between relations and functions.	A1 M3 Lesson 1: The Definition of a Function

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.1.2 Identify the dependent variable, independent variable, domain and range given a function, equation, or graph. Identify restrictions on the domain and range in mathematical models.	A1 M3 Lesson 1: The Definition of a Function A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions A1 M3 Lesson 3: The Graph of a Function A1 M3 Lesson 14: Modeling Elevation as a Function of Time A1 M3 Lesson 17: Step Functions A1 M4 Lesson 2: Projectile Motion A1 M4 Lesson 3: Analyzing Functions That Model Projectile Motion A1 M4 Lesson 23: Creating Equations of Quadratic Functions to Model Contexts *Supplemental material is necessary to address identifying the dependent variable and independent variable.*
A1.F.1.3 Write linear functions, using function notation, to represent mathematical models.	A1 M3 Lesson 6: Representations of Functions
A1.F.1.4 Read and interpret the linear piecewise function, given a graph modeling a situation.	A1 M3 Lesson 14: Modeling Elevation as a Function of Time A1 M3 Lesson 15: Piecewise Linear Functions
A1.F.1.5 Interpret graphs as being discrete or continuous.	A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables

Functions

A1.F.2 Recognize and understand that families of functions are defined by their characteristics.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.2.1 Distinguish between linear and nonlinear (including exponential) functions. Understand that linear functions grow by equal intervals (arithmetic) and that exponential functions grow by equal factors over equal intervals (geometric).	A1 M5 Lesson 15: Calculating Interest A1 M5 Lesson 18: Modeling Populations A1 M5 Lesson 19: Analyzing Exponential Growth A1 M5 Lesson 21: World Population Prediction A1 M5 Lesson 22: A Closer Look at Populations A1 M5 Lesson 24: Modeling an Invasive Species Population 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.F.2.2 Recognize the parent functions $f(x) = x$ and $f(x) = \|x\|$. Predict the effects of vertical and horizontal transformations $f(x + c)$ and $f(x) + c$, algebraically and graphically.	A1 M3 Lesson 16: The Absolute Value Function A1 M3 Lesson 19: Exploring Transformations of the Graphs of Functions A1 M3 Lesson 20: Building New Functions—Translations

Functions

A1.F.3 Represent functions in multiple ways and use the representation to interpret real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.3.1 Identify and generate equivalent representations of linear functions, graphs, tables, and real-world situations.	A1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables A1 M2 Lesson 2: Graphing Linear Equations in Two Variables A1 M2 Lesson 3: Creating Linear Equations
A1.F.3.2 Use function notation; evaluate a function, including nonlinear, at a given point in its domain algebraically and graphically. Interpret the results in terms of the original context.	A1 M3 Lesson 1: The Definition of a Function A1 M3 Lesson 2: Representing, Naming, and Evaluating Functions A1 M3 Lesson 6: Representations of Functions A1 M3 Lesson 14: Modeling Elevation as a Function of Time A1 M3 Lesson 15: Piecewise Linear Functions A1 M3 Lesson 16: The Absolute Value Function A1 M3 Lesson 17: Step Functions A1 M3 Lesson 18: Piecewise Linear Functions in Context A1 M5 Lesson 1: Exploring Patterns A1 M5 Lesson 2: The Recursive Challenge A1 M5 Lesson 3: Recursive Formulas for Sequences A1 M5 Lesson 4: Explicit Formulas for Sequences A1 M5 Lesson 7: Sierpinski Triangle A1 M5 Lesson 11: Graphing Exponential Functions
A1.F.3.3 Add, subtract, and multiply functions using function notation.	A1 M4 Lesson 25: Maximizing Area A1 M6 Lesson 4: The Deal A1 M6 Lesson 7: World Record Doughnut

Data & Probability

A1.D.1 Display, describe, and compare data. For linear relationships, make predictions, and assess the reliability of those predictions.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.D.1.1 Display, describe, and compare data sets using summary statistics (central tendency and spread (range)). Utilize technology (e.g., spreadsheets, calculators) to display data and calculate summary statistics.	A1 M1 Lesson 19: Distributions and Their Shapes A1 M1 Lesson 20: Describing the Center of a Distribution A1 M1 Lesson 21: Using Center to Compare Data Distributions A1 M1 Lesson 22: Describing Variability in a Univariate Distribution with Standard Deviation A1 M1 Lesson 23: Estimating Variability in Data Distributions A1 M1 Lesson 24: Comparing Distributions of Univariate Data
A1.D.1.2 Collect data and analyze scatter plots for patterns, linearity, and outliers.	A1 M2 Lesson 15: Relationships Between Quantitative Variables A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data
A1.D.1.3 Make predictions based upon the linear regression, and use the correlation coefficient to assess the reliability of those predictions using graphing technology.	A1 M2 Lesson 17: Modeling Relationships with a Line A1 M2 Lesson 20: Interpreting Correlation A1 M2 Lesson 21: Analyzing Bivariate Quantitative Data

Data & Probability

A1.D.2 Calculate probabilities, and apply probability concepts.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.D.2.1 Apply simple counting procedures (factorials, permutations, combinations, and tree diagrams) to determine sample size, sample space, and calculate probabilities.	*Supplemental material is necessary to address the standard and all of its objectives.*
A1.D.2.2 Given a Venn diagram, determine the probability of the union of events, the intersection of events, and the complement of an event. Understand the relationships between these concepts and the words "AND," "OR," and "NOT."	*Supplemental material is necessary to address the standard and all of its objectives.*
A1.D.2.3 Use simulations and experiments to calculate experimental probabilities.	*Supplemental material is necessary to address the standard and all of its objectives.*
A1.D.2.4 Apply probability concepts to real-world situations to make informed decisions.	*Supplemental material is necessary to address the standard and all of its objectives.*