
Grade 7 | North Dakota Mathematics K–12 Standards (2018) 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.

Math Attributes	Aligned Components of <i>Eureka Math</i>²
<p>6–8.MA.P</p> <p>Learners can analyze information and formulate a flexible, systematic plan to problem-solve authentic situations and reflect on the reasonableness of the solution, making revisions when necessary.</p>	<p>Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.</p>
<p>6–8.MA.C</p> <p>Learners can create connections within and across concepts and provide examples of how they relate to other learning and ideas using supporting evidence.</p>	<p>Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.</p>
<p>6–8.MA.R</p> <p>Learners can reason logically, citing evidence to evaluate and explain what they see, think, and conclude through exploration and justification.</p>	<p>Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.</p>

Number and Operations: Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.

7.NO.NS Number Systems: Learners will expand their knowledge of the number system to create connections and solve problems within and across concepts.

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<p>7.NO.NS.1</p> <p>Describe the absolute value of a number as its distance from zero on a number line.</p>	<p>6 M3 Lesson 5: Comparing Rational Numbers</p> <p>6 M3 Lesson 6: Ordering Rational Numbers</p> <p>6 M3 Lesson 7: Absolute Value</p> <p>6 M3 Lesson 8: Absolute Value and Order</p> <p>6 M3 Lesson 9: Interpreting Order and Distance in Real-World Situations</p>
<p>7.NO.NS.2</p> <p>Recognize common fractions and decimal equivalencies up to a denominator of 10. Convert a rational number to a decimal using technology.</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>

Number and Operations: Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.

7.NO.O Operations: Learners will expand their computational fluency to create connections and solve problems within and across concepts.

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<p>7.NO.O.1</p> <p>Add, subtract, multiply, and divide integers using visual models and properties of operations in multi-step problems, including authentic problems.</p>	<p>7 M2 Lesson 1: Combining Opposites</p> <p>7 M2 Lesson 2: Adding Integers</p> <p>7 M2 Lesson 3: Adding Integers Efficiently</p> <p>7 M2 Lesson 4: KAKOOMA®</p> <p>7 M2 Lesson 7: What Subtraction Means</p> <p>7 M2 Lesson 8: Subtracting Integers, Part 1</p> <p>7 M2 Lesson 9: Subtracting Integers, Part 2</p> <p>7 M2 Lesson 12: The Integer Game</p> <p>7 M2 Lesson 13: Understanding Multiples of Negative Numbers</p> <p>7 M2 Lesson 14: Understanding the Product of Two Negative Numbers</p> <p>7 M2 Lesson 17: Understanding Negative Dividends</p> <p>7 M2 Lesson 18: Understanding Negative Divisors</p> <p><i>Supplemental material is necessary to address using properties of operations in multi-step problems.</i></p>
<p>7.NO.O.2</p> <p>Add, subtract, multiply, and divide nonnegative fractions in multi-step problems, including authentic problems.</p>	<p>6 M2 Lesson 12: Fraction Operations in a Real-World Situation</p>

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<p>7.NO.O.3</p> <p>Add, subtract, multiply, and divide nonnegative decimals to the hundredth place in multi-step problems using strategies or procedures, including authentic problems.</p>	<p>6 M2 Lesson 13: Decimal Addition and Subtraction</p> <p>6 M2 Lesson 14: Patterns in Multiplying Decimals</p> <p>6 M2 Lesson 15: Decimal Multiplication</p> <p>6 M2 Lesson 16: Applications of Decimal Operations</p> <p>6 M2 Lesson 21: Dividing a Decimal by a Whole Number</p> <p>6 M2 Lesson 22: Dividing a Decimal by a Decimal Greater Than 1</p> <p>6 M2 Lesson 23: Dividing a Decimal by a Decimal Less Than 1</p> <p>6 M2 Lesson 24: Living on Mars</p>
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Algebraic Reasoning: Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.

7.AR.RP Ratios and Proportional Relationships: Learners will use ratios, rates, and proportions to model relationships and solve problems.

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<p>7.AR.RP.1</p> <p>Calculate unit rates associated with ratios of rational numbers, including ratios of lengths, areas, and other quantities measured in like or different units.</p>	<p>7 M1 Lesson 1: An Experiment with Ratios and Rates</p> <p>7 M1 Lesson 2: Exploring Tables of Proportional Relationships</p> <p>7 M1 Lesson 3: Identifying Proportional Relationships in Tables</p>
<p>7.AR.RP.2</p> <p>Analyze the relationship between the dependent and independent variables of a proportional relationship using graphs and tables. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, k)$ where k is the unit rate.</p>	<p>6 M4 Lesson 22: Relationship Between Two Variables</p> <p>6 M4 Lesson 23: Graphs of Ratio Relationships</p> <p>6 M4 Lesson 24: Graphs of Non-Ratio Relationships</p> <p>6 M4 Lesson 25: The Statue of Liberty</p> <p>7 M1 Lesson 1: An Experiment with Ratios and Rates</p> <p>7 M1 Lesson 2: Exploring Tables of Proportional Relationships</p> <p>7 M1 Lesson 3: Identifying Proportional Relationships in Tables</p> <p>7 M1 Lesson 4: Exploring Graphs of Proportional Relationships</p> <p>7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships</p> <p>7 M1 Lesson 6: Identifying Proportional Relationships in Written Descriptions</p> <p>7 M1 Lesson 9: Comparing Proportional Relationships</p> <p>7 M1 Lesson 14: Extreme Bicycles</p>

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<p>7.AR.RP.3</p> <p>Identify the constant of proportionality in tables, graphs, equations, diagrams, and descriptions of proportional relationships. Represent proportional relationships by an equation of the form $y = kx$, where k is the constant of proportionality, and describe the meaning of each variable (y, k, x) in the context of the situation.</p>	<p>7 M1 Lesson 2: Exploring Tables of Proportional Relationships</p> <p>7 M1 Lesson 3: Identifying Proportional Relationships in Tables</p> <p>7 M1 Lesson 4: Exploring Graphs of Proportional Relationships</p> <p>7 M1 Lesson 5: Analyzing Graphs of Proportional Relationships</p> <p>7 M1 Lesson 6: Identifying Proportional Relationships in Written Descriptions</p> <p>7 M1 Lesson 8: Relating Representations of Proportional Relationships</p> <p>7 M1 Lesson 9: Comparing Proportional Relationships</p> <p>7 M1 Lesson 10: Applying Proportional Reasoning</p> <p>7 M1 Lesson 11: Constant Rates</p> <p>7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1</p> <p>7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2</p> <p>7 M1 Lesson 16: Using a Scale Factor</p> <p>7 M1 Lesson 18: Relating Areas of Scale Drawings</p> <p>7 M5 Lesson 1: Proportionality and Scale Factor</p> <p>7 M5 Lesson 4: Proportion and Percent</p> <p>7 M5 Lesson 5: Common Denominators or Common Numerators</p>
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<p>7.AR.RP.4</p> <p>Use proportional relationships to solve multi-step problems involving ratios, percents, and scale drawings of geometric figures, including authentic problems.</p>	<p>7 M1 Lesson 7: Handstand Sprint</p> <p>7 M1 Lesson 10: Applying Proportional Reasoning</p> <p>7 M1 Lesson 11: Constant Rates</p> <p>7 M1 Lesson 12: Multi-Step Ratio Problems, Part 1</p> <p>7 M1 Lesson 13: Multi-Step Ratio Problems, Part 2</p> <p>7 M1 Lesson 15: Scale Drawings</p> <p>7 M1 Lesson 16: Using a Scale Factor</p> <p>7 M1 Lesson 17: Finding Actual Distances from a Scale Drawing</p> <p>7 M1 Lesson 18: Relating Areas of Scale Drawings</p> <p>7 M1 Lesson 19: Scale and Scale Factor</p> <p>7 M1 Lesson 20: Creating Multiple Scale Drawings</p> <p>7 M5 Lesson 1: Proportionality and Scale Factor</p> <p>7 M5 Lesson 2: Racing for Percents</p> <p>7 M5 Lesson 3: Percent as a Rate per 100</p> <p>7 M5 Lesson 4: Proportion and Percent</p> <p>7 M5 Lesson 5: Common Denominators or Common Numerators</p> <p>7 M5 Lesson 6: Finding Commission</p> <p>7 M5 Lesson 7: Finding Discounts</p> <p>7 M5 Lesson 8: Determining Fees</p> <p>7 M5 Lesson 9: Tax as a Fee</p> <p>7 M5 Lesson 10: Percent Increase</p> <p>7 M5 Lesson 11: Percent Decrease</p> <p>7 M5 Lesson 12: More Discounts</p> <p>7 M5 Lesson 13: What Is the Best Deal?</p>
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<p>7.AR.RP.4 <i>continued</i></p>	<p>7 M5 Lesson 14: Scale Factor—Percent Increase and Decrease</p> <p>7 M5 Lesson 15: Tips and Taxes</p> <p>7 M5 Lesson 16: Markups and Discounts</p> <p>7 M5 Lesson 17: Simple Interest and Proportionality</p> <p>7 M5 Lesson 18: Simple Interest—Solving for Unknown Values</p> <p>7 M5 Lesson 19: Applying Percent Error</p> <p>7 M5 Lesson 20: Making Money, Day 1</p> <p>7 M5 Lesson 21: Making Money, Day 2</p> <p>7 M5 Lesson 22: Making Mixtures</p> <p>7 M5 Lesson 23: Percents of Percents</p> <p>7 M5 Lesson 24: Counting Problems</p>
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Algebraic Reasoning: Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.

7.AR.EE Expressions and Equations: Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adapting approaches in novel situations.

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<p>7.AR.EE.1</p> <p>Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions involving variables, integers, and/or nonnegative fractions and decimals with an emphasis on writing equivalent expressions.</p>	<p>7 M3 Lesson 1: Equivalent Expressions</p> <p>7 M3 Lesson 2: The Distributive Property and the Tabular Model</p> <p>7 M3 Lesson 3: The Distributive Property and Combining Like Terms</p> <p>7 M3 Lesson 4: Adding and Subtracting Expressions</p> <p>7 M3 Lesson 5: Factoring Expressions</p> <p>7 M3 Lesson 6: Comparing Expressions</p>
<p>7.AR.EE.2</p> <p>Write and solve equations of the form $px + q = r$ and $p(x + q) = r$, including authentic problems.</p>	<p>7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures</p> <p>7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 10: Problem Solving with Unknown Angle Measures</p> <p>7 M3 Lesson 11: Dominoes and Dominoes</p> <p>7 M3 Lesson 12: Solving Problems Algebraically and Arithmetically</p> <p>7 M3 Lesson 13: Solving Equations—Puzzles</p> <p>7 M3 Lesson 14: Solving Equations—Scavenger Hunt</p> <p>7 M3 Lesson 15: Solving Equations Fluently</p> <p>7 M3 Lesson 16: Using Equations to Solve Rate Problems</p> <p>7 M3 Lesson 23: Inequalities vs. Equations</p>

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<p>7.AR.EE.3</p> <p>Write and solve one- or two-step inequalities where coefficients and solutions are integers and/or nonnegative fractions and decimals, including authentic problems. Graph the solution set of the inequality and interpret it in the context of the problem.</p>	<p>7 M3 Lesson 18: Understanding Inequalities and Their Solutions</p> <p>7 M3 Lesson 19: Using Equations to Solve Inequalities</p> <p>7 M3 Lesson 20: Preserving and Reversing</p> <p>7 M3 Lesson 21: Solving Two-Step Inequalities</p> <p>7 M3 Lesson 22: Solving Problems Involving Inequalities</p> <p>7 M3 Lesson 23: Inequalities vs. Equations</p>
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Geometry and Measurement: Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.

7.GM.AV Area and Volume: Learners will use visualization and spatial reasoning to solve authentic and mathematical problems involving area, surface area, and volume of geometric figures.

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<p>7.GM.AV.1</p> <p>Describe the relationship between the circumference and diameter of a circle (π). Apply given formulas to calculate the area and circumference of a circle, including authentic problems.</p>	<p>7 M4 Lesson 9: Constructing a Circle</p> <p>7 M4 Lesson 10: The Outside of a Circle</p> <p>7 M4 Lesson 11: The Inside of a Circle</p> <p>7 M4 Lesson 12: Exploring the Area and Circumference of a Circle</p> <p>7 M4 Lesson 13: Finding Areas of Circular Regions</p> <p>7 M4 Lesson 14: Composite Figures with Circular Regions</p> <p>7 M4 Lesson 15: Watering a Lawn</p>
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Aligned Components of *Eureka Math*²

<p>7.GM.AV.2</p> <p>Calculate areas of polygons by composing and/or decomposing them into rectangles and triangles, including authentic problems. Solve problems involving the surface area of prisms and right pyramids using nets, including authentic problems.</p>	<p>7 M4 Lesson 16: Solving Area Problems by Composition and Decomposition</p> <p>7 M4 Lesson 17: Surface Area of Right Rectangular and Right Triangular Prisms</p> <p>7 M4 Lesson 18: Surface Area of Right Prisms</p> <p>7 M4 Lesson 20: Surface Area of Right Pyramids</p> <p>7 M4 Lesson 21: Surface Area of Other Solids</p> <p>7 M4 Lesson 26: Designing a Fish Tank</p>
<p>7.GM.AV.3</p> <p>Solve problems involving the volume of prisms and composite solids, including authentic problems.</p>	<p>7 M4 Lesson 24: Volume of Prisms</p> <p>7 M4 Lesson 25: Volume of Composite Solids</p> <p>7 M4 Lesson 26: Designing a Fish Tank</p>

Geometry and Measurement: Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.

7.GM.GF Geometric Figures: Learners will use visualization, spatial reasoning, and geometric modeling to investigate the characteristics of figures, perform transformations, and construct logical arguments.

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Aligned Components of *Eureka Math*²

<p>7.GM.GF.1</p> <p>Draw triangles from given conditions using appropriate tools. Defend whether a unique triangle, multiple triangles, or no triangle can be constructed when given three measures of angles or sides.</p>	<p>7 M4 Lesson 1: Sketching, Drawing, and Constructing Geometric Figures</p> <p>7 M4 Lesson 2: Constructing Parallelograms and Other Quadrilaterals</p> <p>7 M4 Lesson 3: Side Lengths of a Triangle</p> <p>7 M4 Lesson 4: Angles of a Triangle</p> <p>7 M4 Lesson 5: Constructing Quadrilaterals and Triangles</p> <p>7 M4 Lesson 6: Unique Triangles</p> <p>7 M4 Lesson 7: Two Angles and One Side</p> <p>7 M4 Lesson 8: Two Sides and One Angle</p>
<p>7.GM.GF.2</p> <p>Describe the following angle-pair relationships: supplementary angles, complementary angles, vertical angles, and adjacent angles. Solve for an unknown angle in a figure by applying facts about these angles.</p>	<p>7 M3 Lesson 7: Angle Relationships and Unknown Angle Measures</p> <p>7 M3 Lesson 8: Strategies to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 9: Solving Equations to Determine Unknown Angle Measures</p> <p>7 M3 Lesson 10: Problem Solving with Unknown Angle Measures</p>

Data, Probability, and Statistics: Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic concepts of probability.

7.DPS.D Data Analysis: Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, and making predictions.

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<p>7.DPS.D.1</p> <p>Identify the strengths and weaknesses of a population sample including bias in the process of the data collection.</p>	<p>7 M6 Lesson 11: Populations and Samples</p> <p>7 M6 Lesson 12: Selecting a Sample</p> <p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p>
<p>7.DPS.D.2</p> <p>Analyze and draw inferences about a population using single and multiple random samples by using given measures of center and variability for the numerical data set.</p>	<p>7 M6 Lesson 13: Variability Between Samples</p> <p>7 M6 Lesson 14: Sampling Variability When Estimating a Population Mean</p> <p>7 M6 Lesson 15: Sampling Variability and the Effect of Sample Size</p> <p>7 M6 Lesson 16: Sampling Variability When Estimating a Population Proportion</p> <p>7 M6 Lesson 17: Comparing Sample Means</p> <p>7 M6 Lesson 18: Comparing Population Means</p> <p>7 M6 Lesson 19: Memory Games</p>

Data, Probability, and Statistics: Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic concepts of probability.

7.DPS.P Probability: Learners will understand and apply basic concepts of probability.

North Dakota Mathematics K–12 Standards	Aligned Components of <i>Eureka Math</i> ²
<p>7.DPS.P.1</p> <p>Develop a probability model to find probabilities of theoretical events and contrast probabilities from an experimental model.</p>	<p>7 M6 Lesson 1: What is Probability?</p> <p>7 M6 Lesson 2: Empirical Probability</p> <p>7 M6 Lesson 3: Outcomes of Chance Experiments</p> <p>7 M6 Lesson 4: Theoretical Probability</p> <p>7 M6 Lesson 6: Outcomes That Are Not Equally Likely</p> <p>7 M6 Lesson 7: The Law of Large Numbers</p> <p>7 M6 Lesson 8: Picking Blue</p>
<p>7.DPS.P.2</p> <p>Develop a probability model to find theoretical probabilities of independent compound events.</p>	<p>7 M6 Lesson 5: Multistage Experiments</p> <p>7 M6 Lesson 9: Probability Simulations</p> <p>7 M6 Lesson 10: Simulations with Random Number Tables</p>