EUREKA MATH®

Grade 4 | New York Next Generation Mathematics Learning Standards Correlation to *Eureka Math*®

About *Eureka Math*

Created by Great Minds®, a mission-driven Public Benefit Corporation, *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

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.

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

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

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example:
MP.2 Reason abstractly and quantitatively.	
MP.3 Construct viable arguments and critique the reasoning of others.	
MP.4 Model with mathematics.	
MP.5 Use appropriate tools strategically.	
MP.6 Attend to precision.	
MP.7 Look for and make use of structure.	
MP.8 Look for and express regularity in repeated reasoning.	

Operations and Algebraic Thinking
Use the four operations with whole numbers to solve problems.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.OA.1 Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.	G4 M1 Lesson 1: Interpret a multiplication equation as a comparison. G4 M1 Lesson 2: Recognize a digit represents 10 times the value of what it represents in the place to its right. G4 M3 Lesson 2: Solve multiplicative comparison word problems by applying the area and perimeter formulas. G4 M3 Topic D: Multiplication Word Problems G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables.
NY-4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. Use drawings and equations with a symbol for the unknown number to represent the problem.	G4 M3 Lesson 2: Solve multiplicative comparison word problems by applying the area and perimeter formulas. G4 M3 Lesson 3: Demonstrate understanding of area and perimeter formulas by solving multi-step real-world problems. G4 M3 Lesson 11: Connect the area model and the partial products method to the standard algorithm. G4 M3 Topic D: Multiplication Word Problems G4 M3 Lesson 26: Divide multiples of 10, 100, and 1,000 by single-digit numbers. G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables. G4 M7 Lesson 5: Share and critique peer strategies. G4 M7 Lesson 8: Solve problems involving mixed units of weight. G4 M7 Lesson 10: Solve multi-step measurement word problems.

New York Next Generation Mathematics Learning Standards	**Aligned Components of *Eureka Math***
NY-4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.	G4 M1 Topic D: Multi-Digit Whole Number Addition G4 M1 Topic E: Multi-Digit Whole Number Subtraction G4 M1 Topic F: Addition and Subtraction Word Problems G4 M2 Topic A: Metric Unit Conversions G4 M2 Lesson 5: Use addition and subtraction to solve multi-step word problems involving length, mass, and capacity. G4 M3 Topic D: Multiplication Word Problems G4 M3 Lesson 29: Represent numerically four-digit dividend division with divisors of 2, 3, 4, and 5, decomposing a remainder up to three times. G4 M3 Lesson 31: Interpret division word problems as either *number of groups unknown* or *group size unknown*. G4 M3 Lesson 32: Interpret and find whole number quotients and remainders to solve one-step division word problems with larger divisors of 6, 7, 8, and 9. G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables. G4 M7 Lesson 10: Solve multi-step measurement word problems. G4 M7 Lesson 11: Solve multi-step measurement word problems.
NY-4.OA.3.a Represent these problems using equations or expressions with a letter standing for the unknown quantity.	G4 M1 Topic D: Multi-Digit Whole Number Subtraction G4 M1 Topic E: Multi-Digit Whole Number Subtraction G4 M1 Topic F: Addition and Subtraction Word Problems G4 M2 Topic A: Metric Unit Conversions G4 M2 Lesson 5: Use addition and subtraction to solve multi-step word problems involving length, mass, and capacity. G4 M3 Topic D: Multiplication Word Problems

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.OA.3.a *continued*	G4 M3 Lesson 29: Represent numerically four-digit dividend division with divisors of 2, 3, 4, and 5, decomposing a remainder up to three times.
	G4 M3 Lesson 31: Interpret division word problems as either number of groups unknown or group size unknown.
	G4 M3 Lesson 32: Interpret and find whole number quotients and remainders to solve one-step division word problems with larger divisors of 6, 7, 8, and 9.
	G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables.
	G4 M7 Lesson 10: Solve multi-step measurement word problems.
	G4 M7 Lesson 11: Solve multi-step measurement word problems.
NY-4.OA.3.b Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	G4 M1 Lesson 12: Solve multi-step word problems using the standard addition algorithm modeled with tape diagrams, and assess the reasonableness of answers using rounding.
	G4 M1 Lesson 16: Solve multi-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams, and assess the reasonableness of answers using rounding.
	G4 M1 Lesson 18: Solve multi-step word problems modeled with tape diagrams, and assess the reasonableness of answers using rounding.
	G4 M2 Lesson 5: Use addition and subtraction to solve multi-step word problems involving length, mass, and capacity.

Operations and Algebraic Thinking
Gain familiarity with factors and multiples.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	G4 M3 Topic F: Reasoning with Divisibility G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.

Operations and Algebraic Thinking
Generate and analyze patterns.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.OA.5 Generate a number or shape pattern that follows a given rule. Identify and informally explain apparent features of the pattern that were not explicit in the rule itself.	G4 M1 Lesson 6: Find 1, 10, and 100 thousand more and less than a given number. G4 M3 Lesson 23: Use division and the associative property to test for factors and observe patterns. G4 M3 Lesson 24: Determine if a whole number is a multiple of another number. G4 M3 Lesson 25: Explore properties of prime and composite numbers to 100 by using multiples. G4 M5 Topic H: Exploring a Fraction Pattern G6 M2 Lesson 16: Even and Odd Numbers

Number and Operations in Base Ten

Generalize place value understanding for multi-digit whole numbers.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	G4 M1 Lesson 1: Interpret a multiplication equation as a comparison. G4 M1 Lesson 2: Recognize a digit represents 10 times the value of what it represents in the place to its right. G4 M1 Lesson 3: Name numbers within 1 million by building understanding of the place value chart and placement of commas for naming base thousand units. G4 M3 Topic B: Multiplication by 10, 100, and 1,000
NY-4.NBT.2a Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.	G4 M1 Lesson 2: Recognize a digit represents 10 times the value of what it represents in the place to its right. G4 M1 Lesson 3: Name numbers within 1 million by building understanding of the place value chart and placement of commas for naming base thousand units. G4 M1 Lesson 4: Read and write multi-digit numbers using base ten numerals, number names, and expanded form. G4 M1 Lesson 5: Compare numbers based on meanings of the digits, using >, <, or = to record the comparison. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NBT.2b Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	G4 M1 Lesson 2: Recognize a digit represents 10 times the value of what it represents in the place to its right. G4 M1 Lesson 3: Name numbers within 1 million by building understanding of the place value chart and placement of commas for naming base thousand units. G4 M1 Lesson 4: Read and write multi-digit numbers using base ten numerals, number names, and expanded form. G4 M1 Lesson 5: Compare numbers based on meanings of the digits, using >, <, or = to record the comparison. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.
NY-4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.	G4 M1 Topic C: Rounding Multi-Digit Whole Numbers

Number and Operations in Base Ten
Use place value understanding and properties of operations to perform multi-digit arithmetic.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NBT.4 Fluently add and subtract multi-digit whole numbers using a standard algorithm.	G4 M1 Lesson 11: Use place value understanding to fluently add multi-digit whole numbers using the standard addition algorithm, and apply the algorithm to solve word problems using tape diagrams. G4 M1 Lesson 13: Use place value understanding to decompose to smaller units once using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams. G4 M1 Lesson 14: Use place value understanding to decompose to smaller units up to three times using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NBT.4 *continued*	G4 M1 Lesson 15: Use place value understanding to fluently decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.
NY-4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	G4 M3 Topic B: Multiplication by 10, 100, and 1,000 G4 M3 Topic C: Multiplication of up to Four Digits by Single-Digit Numbers G4 M3 Topic D: Multiplication Word Problems G4 M3 Topic H: Multiplication of Two-Digit by Two-Digit Numbers G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.
NY-4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	G4 M3 Topic E: Division of Tens and Ones with Successive Remainders G4 M3 Lesson 26: Divide multiples of 10, 100, and 1,000 by single-digit numbers. G4 M3 Lesson 27: Represent and solve division problems with up to a three-digit dividend numerically and with place value disks requiring decomposing a remainder in the hundreds place. G4 M3 Lesson 28: Represent and solve three-digit dividend division with divisors of 2, 3, 4, and 5 numerically. G4 M3 Lesson 29: Represent numerically four-digit dividend division with divisors of 2, 3, 4, and 5, decomposing a remainder up to three times. G4 M3 Lesson 30: Solve division problems with a zero in the dividend or with a zero in the quotient. G4 M3 Lesson 32: Interpret and find whole number quotients and remainders to solve one-step division word problems with larger divisors of 6, 7, 8, and 9. G4 M3 Lesson 33: Explain the connection of the area model of division to the long division algorithm for three- and four-digit dividends. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.

Number and Operations—Fractions
Extend understanding of fraction equivalence and ordering.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.1 Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{a \times n}{b \times n}$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	G4 M5 Lesson 5: Decompose unit fractions using area models to show equivalence. G4 M5 Lesson 6: Decompose fractions using area models to show equivalence. G4 M5 Topic B: Fraction Equivalence Using Multiplication and Division G4 M5 Lesson 20: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12. G4 M5 Lesson 21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12. G4 M6 Lesson 5: Model the equivalence of tenths and hundredths using the area model and place value disks. G4 M6 Lesson 8: Use understanding of fraction equivalence to investigate decimal numbers on the place value chart expressed in different units. G5 M3 Lesson 1: Make equivalent fractions with the number line, the area model, and numbers.
NY-4.NF.2 Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions.	G4 M5 Topic C: Fraction Comparison G4 M5 Lesson 26: Compare fractions greater than 1 by reasoning using benchmark fractions. G4 M5 Lesson 27: Compare fractions greater than 1 by creating common numerators or denominators. G4 M5 Lesson 28: Solve word problems with line plots.

Number and Operations—Fractions

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.3 Understand a fraction $\frac{a}{b}$ with $a > 1$ as a sum of fractions $\frac{1}{b}$.	G4 M5 Lesson 1: Decompose fractions as a sum of unit fractions using tape diagrams. G4 M5 Lesson 2: Decompose fractions as a sum of unit fractions using tape diagrams. G4 M5 Lesson 4: Decompose fractions into sums of smaller unit fractions using tape diagrams. G4 M5 Lesson 5: Decompose unit fractions using area models to show equivalence. G4 M5 Lesson 6: Decompose fractions using area models to show equivalence. G4 M5 Topic D: Fraction Addition and Subtraction G4 M5 Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models. G4 M5 Lesson 24: Decompose and compose fractions greater than 1 to express them in various forms. G4 M5 Lesson 28: Solve word problems with line plots. G4 M5 Topic F: Addition and Subtraction of Fractions by Decomposition
NY-4.NF.3.a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	G4 M5 Lesson 16: Use visual models to add and subtract two fractions with the same units. G4 M5 Lesson 17: Use visual models to add and subtract two fractions with the same units, including subtracting from one whole. G4 M5 Lesson 18: Add and subtract more than two fractions. G4 M5 Lesson 20: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12. G4 M5 Lesson 21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12. G4 M5 Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.3.b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions.	G4 M5 Lesson 1: Decompose fractions as a sum of unit fractions using tape diagrams. G4 M5 Lesson 2: Decompose fractions as a sum of unit fractions using tape diagrams. G4 M5 Lesson 4: Decompose fractions into sums of smaller unit fractions using tape diagrams. G4 M5 Lesson 5: Decompose unit fractions using area models to show equivalence. G4 M5 Lesson 6: Decompose fractions using area models to show equivalence. G5 M3 Lesson 2: Make equivalent fractions with sums of fractions with like denominators.
NY-4.NF.3.c Add and subtract mixed numbers with like denominators.	G4 M5 Lesson 24: Decompose and compose fractions greater than 1 to express them in various forms. G4 M5 Topic F: Addition and Subtraction of Fractions by Decomposition
NY-4.NF.3.d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.	G4 M5 Lesson 19: Solve word problems involving addition and subtraction of fractions. G4 M5 Lesson 28: Solve word problems with line plots.
NY-4.NF.4 Apply and extend previous understandings of multiplication to multiply a whole number by a fraction.	G4 M5 Lesson 3: Decompose non-unit fractions and represent them as a whole number times a unit fraction using tape diagrams. G4 M5 Lesson 4: Decompose fractions into sums of smaller unit fractions using tape diagrams. G4 M5 Lesson 5: Decompose unit fractions using area models to show equivalence. G4 M5 Lesson 6: Decompose fractions using area models to show equivalence. G4 M5 Lesson 23: Add and multiply unit fractions to build fractions greater than 1 using visual models. G4 M5 Lesson 25: Decompose and compose fractions greater than 1 to express them in various forms. G4 M5 Topic G: Repeated Addition of Fractions as Multiplication

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.4.a Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$.	G4 M5 Lesson 3: Decompose non-unit fractions and represent them as a whole number times a unit fraction using tape diagrams. G4 M5 Lesson 4: Decompose fractions into sums of smaller unit fractions using tape diagrams. G4 M5 Lesson 5: Decompose unit fractions using area models to show equivalence. G4 M5 Lesson 6: Decompose fractions using area models to show equivalence. G4 M5 Lesson 35: Represent the multiplication of n times $\frac{a}{b}$ as $\frac{n \times a}{b}$ using the associative property and visual models. G5 M3 Lesson 2: Make equivalent fractions with sums of fractions with like denominators.
NY-4.NF.4.b Understand a multiple of $\frac{a}{b}$ as a multiple of $\frac{1}{b}$, and use this understanding to multiply a whole number by a fraction.	G4 M5 Lesson 23: Add and multiply unit fractions to build fractions greater than 1 using visual models. G4 M5 Lesson 25: Decompose and compose fractions greater than 1 to express them in various forms. G4 M5 Lesson 35: Represent the multiplication of n times $\frac{a}{b}$ as $\frac{n \times a}{b}$ using the associative property and visual models. G4 M5 Lesson 36: Represent the multiplication of n times $\frac{a}{b}$ as $\frac{n \times a}{b}$ using the associative property and visual models. G4 M5 Lesson 37: Find the product of a whole number and a mixed number using the distributive property. G4 M5 Lesson 38: Find the product of a whole number and a mixed number using the distributive property. G5 M3 Lesson 2: Make equivalent fractions with sums of fractions with like denominators.
NY-4.NF.4.c Solve word problems involving multiplication of a whole number by a fraction.	G4 M5 Topic G: Repeated Addition of Fractions as Multiplication

Number and Operations—Fractions
Understand decimal notation for fractions, and compare decimal fractions.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.	G4 M6 Lesson 4: Use meters to model the decomposition of one whole into hundredths. Represent and count hundredths. G4 M6 Lesson 5: Model the equivalence of tenths and hundredths using the area model and place value disks. G4 M6 Lesson 8: Use understanding of fraction equivalence to investigate decimal numbers on the place value chart expressed in different units. G4 M6 Topic D: Addition with Tenths and Hundredths G4 M6 Lesson 15: Express money amounts given in various forms as decimal numbers.
NY-4.NF.6 Use decimal notation for fractions with denominators 10 or 100.	G4 M6 Topic A: Exploration of Tenths G4 M6 Lesson 4: Use meters to model the decomposition of one whole into hundredths. Represent and count hundredths. G4 M6 Lesson 5: Model the equivalence of tenths and hundredths using the area model and place value disks. G4 M6 Lesson 6: Use the area model and number line to represent mixed numbers with units of ones, tenths, and hundredths in fraction and decimal forms. G4 M6 Lesson 7: Model mixed numbers with units of hundreds, tens, ones, tenths, and hundredths in expanded form and on the place value chart. G4 M6 Lesson 12: Apply understanding of fraction equivalence to add tenths and hundredths. G4 M6 Lesson 13: Add decimal numbers by converting to fraction form. G4 M6 Lesson 15: Express money amounts given in various forms as decimal numbers. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions.	G4 M6 Topic C: Decimal Comparison

Measurement and Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.1.i Know relative sizes of measurement units: ft., in.; km, m, cm.	G4 M2 Lesson 1: Express metric length measurements in terms of a smaller unit; model and solve addition and subtraction word problems involving metric length. G4 M2 Lesson 4: Know and relate metric units to place value units in order to express measurements in different units. G4 M7 Lesson 1: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems. G4 M7 Lesson 7: Solve problems involving mixed units of length. G4 M7 Lesson 12: Use measurement tools to convert mixed number measurements to smaller units. G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.1.ii Know the conversion factor and use it to convert measurements in a larger unit in terms of a smaller unit: ft., in.; km, m, cm; hr., min., sec.	G4 M2 Lesson 1: Express metric length measurements in terms of a smaller unit; model and solve addition and subtraction word problems involving metric length. G4 M2 Lesson 4: Know and relate metric units to place value units in order to express measurements in different units. G4 M7 Lesson 1: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems. G4 M7 Lesson 3: Create conversion tables for units of time, and use the tables to solve problems. G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables. G4 M7 Lesson 5: Share and critique peer strategies. G4 M7 Lesson 7: Solve problems involving mixed units of length. G4 M7 Lesson 9: Solve problems involving mixed units of time. G4 M7 Lesson 12: Use measurement tools to convert mixed number measurements to smaller units. G4 M7 Lesson 13: Use measurement tools to convert mixed number measurements to smaller units.
NY-4.MD.1.iii Given the conversion factor, convert all other measurements within a single system of measurement from a larger unit to a smaller unit.	G4 M2 Topic A: Metric Unit Conversions G4 M2 Lesson 4: Know and relate metric units to place value units in order to express measurements in different units. G4 M7 Lesson 1: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems. G4 M7 Lesson 2: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems. G4 M7 Lesson 3: Create conversion tables for units of time, and use the tables to solve problems. G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables. G4 M7 Lesson 5: Share and critique peer strategies.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.1.iii *continued*	G4 M7 Lesson 6: Solve problems involving mixed units of capacity.
	G4 M7 Lesson 7: Solve problems involving mixed units of length.
	G4 M7 Lesson 8: Solve problems involving mixed units of weight.
	G4 M7 Lesson 9: Solve problems involving mixed units of time.
	G4 M7 Lesson 12: Use measurement tools to convert mixed number measurements to smaller units.
	G4 M7 Lesson 13: Use measurement tools to convert mixed number measurements to smaller units.
NY-4.MD.1.iv Record measurement equivalents in a two-column table.	G4 M2 Topic A: Metric Unit Conversions
	G4 M7 Lesson 1: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems.
	G4 M7 Lesson 2: Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems.
	G4 M7 Lesson 3: Create conversion tables for units of time, and use the tables to solve problems.
NY-4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.	G4 M2 Topic A: Metric Unit Conversions
	G4 M2 Lesson 5: Use addition and subtraction to solve multi-step word problems involving length, mass, and capacity.
	G4 M5 Lesson 40: Solve word problems involving the multiplication of a whole number and a fraction including those involving line plots.
	G4 M6 Lesson 14: Solve word problems involving the addition of measurements in decimal form.
	G4 M6 Lesson 16: Solve word problems involving money.
	G4 M7 Lesson 3: Create conversion tables for units of time, and use the tables to solve problems.
	G4 M7 Lesson 4: Solve multiplicative comparison word problems using measurement conversion tables.
	G4 M7 Lesson 5: Share and critique peer strategies.
	G4 M7 Lesson 10: Solve multi-step measurement word problems.

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New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.2 *continued*	G4 M7 Lesson 11: Solve multi-step measurement word problems. G4 M7 Lesson 14: Solve multi-step word problems involving converting mixed number measurements to a single unit.
NY-4.MD.2.a Solve problems involving fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	G4 M7 Topic C: Investigation of Measurements Expressed as Mixed Numbers
NY-4.MD.2.b Represent measurement quantities using diagrams that feature a measurement scale, such as number lines.	G4 M2 Topic A: Metric Unit Conversions G4 M2 Lesson 4: Know and relate metric units to place value units in order to express measurements in different units. G4 M7 Lesson 3: Create conversion tables for units of time, and use the tables to solve problems. G4 M7 Lesson 12: Use measurement tools to convert mixed number measurements to smaller units. G4 M7 Lesson 13: Use measurement tools to convert mixed number measurements to smaller units.
NY-4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	G4 M3 Topic A: Multiplicative Comparison Word Problems G4 M7 Lesson 15: Create and determine the area of composite figures. G4 M7 Lesson 16: Create and determine the area of composite figures.

Measurement and Data
Represent and interpret data.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit $\left(\frac{1}{2}, \frac{1}{4}, \frac{1}{8}\right)$. Solve problems involving addition and subtraction of fractions by using information presented in line plots.	G4 M5 Lesson 28: Solve word problems with line plots. G4 M5 Lesson 40: Solve word problems involving the multiplication of a whole number and a fraction including those involving line plots.

Measurement and Data
Geometric measurement: understand concepts of angle and measure angles.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.	G4 M4 Lesson 5: Use a circular protractor to understand a 1-degree angle as $\frac{1}{360}$ of a turn. Explore benchmark angles using the protractor. G4 M4 Lesson 8: Identify and measure angles as turns and recognize them in various contexts. G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.5.a Recognize an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.	G4 M4 Lesson 6: Use varied protractors to distinguish angle measure from length measurement.
NY-4.MD.5.b Recognize an angle that turns through n one-degree angles is said to have an angle measure of n degrees.	G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.
NY-4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	G4 M4 Lesson 5: Use a circular protractor to understand a 1-degree angle as $\frac{1}{360}$ of a turn. Explore benchmark angles using the protractor. G4 M4 Lesson 6: Use varied protractors to distinguish angle measure from length measurement. G4 M4 Lesson 7: Measure and draw angles. Sketch given angle measures, and verify with a protractor. G4 M7 Lesson 16: Create and determine the area of composite figures. G4 M7 Lesson 17: Practice and solidify Grade 4 fluency. G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems.	G4 M4 Topic C: Problem Solving with the Addition of Angle Measures G4 M7 Lesson 17: Practice and solidify Grade 4 fluency.

Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	G4 M4 Topic A: Lines and Angles G4 M4 Lesson 14: Define and construct triangles from given criteria. Explore symmetry in triangles. G4 M4 Lesson 15: Classify quadrilaterals based on parallel and perpendicular lines and the presence or absence of angles of a specified size. G4 M4 Lesson 16: Reason about attributes to construct quadrilaterals on square or triangular grid paper. G4 M7 Lesson 16: Create and determine the area of composite figures. G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary. G5 M6 Lesson 13: Construct parallel line segments on a rectangular grid. G5 M6 Lesson 15: Construct perpendicular line segments on a rectangular grid.

New York Next Generation Mathematics Learning Standards	Aligned Components of *Eureka Math*
NY-4.G.2a Identify and name triangles based on angle size (right, obtuse, acute).	G4 M4 Lesson 13: Analyze and classify triangles based on side length, angle measure, or both. G4 M4 Lesson 14: Define and construct triangles from given criteria. Explore symmetry in triangles. G4 M4 Lesson 16: Reason about attributes to construct quadrilaterals on square or triangular grid paper. G4 M7 Lesson 18: Practice and solidify Grade 4 vocabulary.
NY-4.G.2b Identify and name all quadrilaterals with 2 pairs of parallel sides as parallelograms.	G4 M4 Lesson 12: Recognize lines of symmetry for given two-dimensional figures. Identify line-symmetric figures, and draw lines of symmetry. G4 M4 Lesson 15: Classify quadrilaterals based on parallel and perpendicular lines and the presence or absence of angles of a specified size. G4 M4 Lesson 16: Reason about attributes to construct quadrilaterals on square or triangular grid paper.
NY-4.G.2c Identify and name all quadrilaterals with four right angles as rectangles.	G4 M4 Lesson 12: Recognize lines of symmetry for given two-dimensional figures. Identify line-symmetric figures, and draw lines of symmetry. G4 M4 Lesson 15: Classify quadrilaterals based on parallel and perpendicular lines and the presence or absence of angles of a specified size. G4 M4 Lesson 16: Reason about attributes to construct quadrilaterals on square or triangular grid paper.
NY-4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	G4 M4 Lesson 12: Recognize lines of symmetry for given two-dimensional figures. Identify line-symmetric figures, and draw lines of symmetry. G4 M4 Lesson 13: Analyze and classify triangles based on side length, angle measure, or both. G4 M4 Lesson 14: Define and construct triangles from given criteria. Explore symmetry in triangles.