



Grade 4: **Mathematics**

Quarter 1: Curriculum & Pacing Guide

Quarter Overview

Students extend their understanding of the base-ten system to numbers through 1,000,000. They read, write, compare, compose, and decompose multi-digit numbers and recognize that a digit in one place has ten times the value it has in the place to its right. Students use number lines and place-value reasoning to round numbers and estimate solutions, and they develop fluency with multi-digit addition and subtraction.

They then apply place-value understanding, area models, arrays, and the distributive property to multiply and divide multi-digit numbers. Students explore multiplicative comparisons, factors and multiples, interpret remainders, and apply all four operations to solve multi-step problems. Throughout the units, students use models, equations, estimation, and precise mathematical language to explain and justify their reasoning.

Essential Questions

- How does the position of a digit determine its value?
- What patterns exist within the base-ten number system?
- How can multi-digit numbers be represented, composed, and decomposed in different ways?
- How can place value help us read, write, and compare numbers through 1,000,000?
- How can a number line help us round multi-digit numbers?
- How can estimation help us determine whether an answer is reasonable?
- How does place value support efficient addition and subtraction?
- How can we determine which operation or strategy is most efficient for solving a problem?
- How can we use all four operations to solve multi-step problems?
- How can multiplicative comparisons describe relationships between quantities?
- How can place-value units be composed and decomposed to make multiplication and division easier?
- How do arrays and area models represent multiplication and division?
- How does the distributive property help us multiply multi-digit numbers?
- How are multiplication and division related?
- How can factors and multiples help us understand relationships between numbers?
- What does a remainder represent, and how does the problem context affect its interpretation?
- How can models, equations, and explanations communicate and justify our mathematical reasoning?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics

- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Fourth Grade Quarter 1: *I can statements* (1-9 Weeks)

- I can explain how the position of a digit determines its value.
 - I can read, write, and compare multi-digit numbers up to 1,000,000.
 - I can use a number line to round multi-digit numbers.
 - I can use estimation to check if my answer is reasonable.
 - I can add and subtract multi-digit numbers using place value.
 - I can convert measurements using a metric conversion table.
 - I can describe multiplicative comparisons, like "3 times as many."
 - I can compose and decompose place value units to make multiplication and division easier.
 - I can use arrays and area models to represent multiplication and division.
 - I can use the distributive property to multiply multi-digit numbers.
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Module 1 Reference — Place Value Concepts for Addition and Subtraction (Weeks 2–7)

Standards Addressed — Module 1

- CC.2.2.4.A.1 — Algebraic Concepts: use place value understanding and properties of operations to perform multi-digit arithmetic
- CC.2.4.4.A.1 — Data & Measurement: convert measurements within a single system (metric)
- CC.2.1.4.B.1 — Number & Operations: recognize that a digit in one place represents ten times what it represents in the place to its right
- CC.2.1.4.B.2 — Number & Operations: read, write, and compare multi-digit whole numbers using base-ten numerals, expanded form, and word form

Vocabulary

Content: billion, convert, ten thousand, hundred thousand, kilometer, million, mixed units

Familiar: bundle, centimeter, exchange, expanded form, gram, kilogram, mass, liter, meter, milliliter, regroup, rename, round, standard algorithm, standard form, unbundle, unit form, word form

Academic: express, justify

Materials Needed

Colored pencils · Dry erase markers, erasers · Whiteboards · Envelopes · Markers, pencils · Meter sticks · Rulers · Sticky notes

Curriculum Resources

Eureka Math² Module 1 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](https://www.happy-numbers.com) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 1 / Teach Book · Eureka Math² place value cards (to millions) · Eureka Math² place value disks (one to millions)

Module 2 Reference — Place Value Concepts for Multiplication and Division (Weeks 8–9, continues into Q2)

Standards Addressed — Module 2

- CC.2.1.4.B.2 — Number & Operations: read, write, and compare multi-digit whole numbers; understand place value structure
- CC.2.4.4.A.3 — Data & Measurement: apply the four operations to solve measurement-related word problems
- CC.2.2.4.A.1 — Algebraic Concepts: use place value understanding and properties of operations to perform multi-digit arithmetic, including multiplication

Vocabulary

Content: associative property of multiplication, composite number, distributive property, divisible, divisor, formula, partial product, partial quotient, prime number, term (in a pattern)

Familiar and academic vocabulary for Module 2 continues to be introduced as the module carries into Quarter 2; see the Q2 guide for the complete list.

Materials Needed

Chart paper · Tablet · Crayons · Dry erase markers, erasers · Whiteboards · Meter stick · Paper strips · Pencils · Rulers

Curriculum Resources

Eureka Math² Module 2 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](https://www.happy-numbers.com) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 2 / Teach Book · Eureka Math² place value disks sets (ones to millions)

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
1	Getting Started	Establish Routines & Classroom Procedures	No new content lessons this week	Set up math routines, tools, and norms for the year
2	Module 1	Place Value Concepts for Addition and Subtraction	Lessons 1–3: Multiplication as Multiplicative Comparison BOY MAP Growth Assessment	How can multiplicative comparisons describe relationships between quantities?
3	Module 1	Place Value Concepts for Addition and Subtraction	Lesson 4: Multiplication as Multiplicative Comparison Lessons 5–8: Place Value and Comparison within 1,000,000	How does the position of a digit determine its value? What patterns exist within the base-ten number system?
4	Module 1	Place Value Concepts for Addition and Subtraction	Lesson 9: Place Value and Comparison within 1,000,000 Lessons 10–12: Rounding Multi-Digit Whole Numbers	How can place value help us read, write, and compare numbers through 1,000,000? How can a number line help us round multi-digit numbers?
5	Module 1	Place Value Concepts for Addition and Subtraction	Lessons 13–15: Rounding Multi-Digit Whole Numbers Lessons 16–17: Multi-Digit Whole Number Addition and Subtraction	How can estimation help us determine whether an answer is reasonable? How does place value support efficient addition and subtraction?
6	Module 1	Place Value Concepts for Addition and Subtraction	Lessons 18–19: Multi-Digit Whole Number Addition and Subtraction Lessons 20–22: Multi-Digit Whole Number Addition and Subtraction	How can we determine which operation or strategy is most efficient for solving a problem?

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
7	Module 1	Metric Measurement Conversion Tables; Module 1 Assessment	Lessons 23–24: Metric Measurement Conversion Tables Module 1 Assessment	<i>How can we use all four operations to solve multi-step problems?</i>
8	Module 2	Place Value Concepts for Multiplication and Division	Lessons 1–3: Compose and Decompose Units of Ten Lessons 4–5: Multiplication of Tens and Ones by One-Digit Numbers	<i>How can place-value units be composed and decomposed to make multiplication and division easier?</i>
9	Module 2	Place Value Concepts for Multiplication and Division	Lessons 6–10: Multiplication of Tens and Ones by One-Digit Numbers	<i>How do arrays and area models represent multiplication and division? How does the distributive property help us multiply multi-digit numbers?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Multiplication as Multiplicative Comparison (Weeks 2–3)	Use bar models to physically show "3 times as many" with counters before writing the comparison as a multiplication equation.	Write and solve multiplicative comparison word problems with an unknown factor; compare additive vs. multiplicative comparison for the same numbers.
Place Value and Comparison within 1,000,000 (Weeks 3–4)	Use place value disks or a place value chart to build numbers one place at a time; compare two numbers by matching up place value columns.	Compare numbers given in different forms (standard, expanded, word) without converting both to standard form first; order a set of large numbers.
Rounding Multi-Digit Whole Numbers (Weeks 4–5)	Use a physical or drawn number line with the target numbers marked; model "which multiple of ten/hundred/thousand is it closer to" with a partner.	Round to any place value in a multi-digit number and explain the rule for numbers exactly halfway; use rounding to estimate sums and differences before calculating.
Multi-Digit Whole Number Addition and Subtraction (Weeks 5–6)	Use place value disks alongside the standard algorithm, modeling each regrouping step explicitly before recording it.	Solve multi-digit addition/subtraction problems requiring several regroupings; choose between the standard algorithm and mental strategies and justify the choice.
Metric Measurement Conversion Tables (Week 7)	Use a physical conversion chart with the relationships (e.g., 1 km = 1,000 m) posted and referenced together before converting independently.	Convert between metric units in multi-step measurement word problems; explain the pattern connecting place value to metric conversions.
Compose and Decompose Units of Ten (Week 8)	Use place value disks to physically group and ungroup tens; connect directly to the multiplication fact being modeled (e.g., 4 tens = 40).	Compose/decompose larger numbers (hundreds, thousands) using the same reasoning; explain the pattern connecting basic facts to their multiples of ten and a hundred.
Multiplication of Tens and Ones by One-Digit Numbers (Weeks 8–9)	Use an area model with the tens and ones parts separated and labeled before combining partial products.	Use the distributive property to multiply in more than one way and compare efficiency; solve problems with larger multi-digit factors.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (place value disks, base-ten blocks, number lines) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "multiplicative comparison," "expanded form," and "distributive property" — using visuals and hands-on modeling before the whole-group lesson.
- Keep numbers within a smaller, familiar range (e.g., within 10,000) while a strategy is new, then extend to the full range (1,000,000) once secure.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on place-value or multiplication tasks.
- Break multi-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend place-value or computation tasks beyond 1,000,000, or introduce problems requiring several regroupings.
- Ask students to justify in writing why one strategy (standard algorithm, mental math, distributive property) is more efficient than another for a given problem.
- Challenge students to represent the same number or product multiple ways (standard form, expanded form, area model, equation) and explain the connections.
- Have students create original word problems for a partner that require a specific strategy.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "convert," "expanded form," "distributive property," metric unit names) with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "The digit in the ___ place is worth ___ because ___." or "I rounded to ___ because ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 4: **Mathematics**

Quarter 2: Curriculum & Pacing Guide

Quarter Overview

Students use place-value understanding and properties of operations to develop efficient strategies for multiplication and division. They compose and decompose units, multiply by multiples of 10, explore factors and multiples, and use arrays and area models to represent calculations.

Students progress to multiplying numbers of up to four digits by one-digit numbers and multiplying two two-digit numbers. They also divide multi-digit numbers by one-digit divisors, determine quotients and remainders, and interpret remainders within problem contexts. Throughout the units, students use estimation, partial products, partial quotients, equations, and models to solve multiplicative comparisons and multi-step real-world problems.

Essential Questions

- How does place value help us multiply and divide multi-digit numbers?
- How can numbers be composed and decomposed to make calculations easier?
- What patterns occur when numbers are multiplied or divided by multiples of 10?
- How can arrays and area models represent multiplication and division?
- How does the distributive property help us solve multiplication problems?
- How are partial products related to multiplication?
- How can known facts help us solve more complex multiplication and division problems?
- What are factors and multiples, and how are they related?
- How can multiplication and division help us solve multi-step, real-world problems?
- How can we determine whether a number is prime or composite?
- How are multiplication and division related?
- How can place value and partial quotients help us divide multi-digit numbers?
- What does a remainder represent?
- How does the context of a problem determine how a remainder should be interpreted?
- How can estimation help us predict and evaluate a product or quotient?
- How can multiplicative comparisons describe relationships between quantities?
- How can we determine which strategy is most efficient for a particular problem?
- How can models, equations, and explanations communicate and justify our mathematical reasoning?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively

- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Fourth Grade Quarter 2: *I can statements* (10-18 Weeks)

- I can use place value to divide tens and ones by a one-digit number.
 - I can solve measurement problems using multiplication and division.
 - I can find factors and multiples of a number.
 - I can tell whether a number is prime or composite.
 - I can multiply and divide by multiples of 10, 100, and 1,000.
 - I can divide multi-digit numbers using place value and partial quotients.
 - I can multiply a number up to four digits by a one-digit number.
 - I can multiply two two-digit numbers using an area model or partial products.
 - I can figure out what a remainder means based on the problem.
 - I can estimate a product or quotient to check if my answer makes sense.
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Module 2 Reference — Place Value Concepts for Multiplication and Division, continued (Weeks 10–13)

Standards Addressed

- CC.2.1.4.B.2 — Number & Operations: read, write, and compare multi-digit whole numbers; apply place value to multiplication and division
- CC.2.4.4.A.1 — Data & Measurement: convert measurements within a single system
- CC.2.4.4.A.3 — Data & Measurement: apply the four operations to solve measurement-related word problems
- CC.2.2.4.A.1 — Algebraic Concepts: use place value understanding and properties of operations to perform multi-digit arithmetic
- CC.2.2.4.A.2 — Algebraic Concepts: gain familiarity with factors and multiples
- CC.2.2.4.A.4 — Algebraic Concepts: generate and analyze a number or shape pattern (prime/composite numbers)

Vocabulary

Content vocabulary was introduced in Quarter 1 (see the Q1 guide) — this quarter adds:

Familiar: area, area model, commutative property of multiplication, factor, foot, inch, length, multiple, perimeter, product, quotient, total, width, yard

Academic: claim

Materials & Resources

Materials for this section match Quarter 1's Module 2 list — see the Q1 guide.

Eureka Math² Module 2 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](#) · Student Learn Book — Module 2 / Teach Book · Eureka Math² place value disks sets (ones to millions)

Module 3 Reference — Multiplication and Division of Multi-Digit Numbers (Weeks 14–18)

Standards Addressed

- CC.2.1.4.B.2 — Number & Operations: read, write, and compare multi-digit whole numbers; apply place value to multiplication and division
- CC.2.4.4.A.1 — Data & Measurement: convert measurements within a single system (customary units)
- CC.2.2.4.A.1 — Algebraic Concepts: use place value understanding and properties of operations to multiply and divide multi-digit numbers

Vocabulary

Content: cup, gallon, long division, ounce, pint, pound, quart, remainder

Familiar: algorithm, area, area model, array, associative property of multiplication, commutative property of multiplication, compare, customary units, distribute, distributive property, divide, division, equation, expression, factor, hours, minutes, seconds, length, metric units, mixed units, multiple, multiply, multiplication, partial product, partial quotient, perimeter, place value, product, total, width, yard, quotient, regroup, rename, rows, columns

Academic: indicate, interpret

Materials Needed

Chart paper · Dry erase markers, erasers · Pencils · Whiteboards · Timer

Curriculum Resources

Eureka Math² Module 3 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](#) · Student Learn Book — Module 3 / Teach Book · Eureka Math² place value disks sets (ones to millions)

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
10	Module 2	Place Value Concepts for Multiplication and Division, continued	Lessons 11–15: Division of Tens and Ones by One-Digit Numbers	<i>How does place value help us multiply and divide multi-digit numbers?</i>
11	Module 2	Place Value Concepts for Multiplication and Division	Lesson 16: Division of Tens and Ones by One-Digit Numbers Lessons 17–20: Problem Solving with Measurement	<i>How can arrays and area models represent multiplication and division?</i>
12	Module 2	Place Value Concepts for Multiplication and Division	Lessons 21–25: Factors and Multiples	<i>What are factors and multiples, and how are they related?</i>
13	Module 2	Factors and Multiples; Module 2 Assessment	Lesson 26: Factors and Multiples Module 2 Assessment	<i>How can we determine whether a number is prime or composite?</i>
14	Module 3	Multiplication and Division of Multi-Digit Numbers	Lessons 1–3: Multiplication and Division of Multiples of Tens, Hundreds, and Thousands Lessons 4–5: Division of Thousands, Hundreds, Tens, and Ones	<i>What patterns occur when numbers are multiplied or divided by multiples of 10?</i>
15	Module 3	Multiplication and Division of Multi-Digit Numbers	Lessons 6–8: Division of Thousands, Hundreds, Tens, and Ones Lessons 9–10: Multiplication of up to Four-Digit Numbers by One-Digit Numbers	<i>How can place value and partial quotients help us divide multi-digit numbers?</i>
16	Module 3	Multiplication and Division of Multi-Digit Numbers	Lessons 11–12: Multiplication of up to Four-Digit Numbers by One-Digit Numbers Lessons 13–15: Multiplication of Two-Digit Numbers by Two-Digit Numbers	<i>How does the distributive property help us solve multiplication problems? How are partial products related to multiplication?</i>

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
17	Module 3	Multiplication and Division of Multi-Digit Numbers	Lessons 16–17: Multiplication of Two-Digit Numbers by Two-Digit Numbers Lessons 18–20: Problem Solving with Measurement	<i>How can known facts help us solve more complex multiplication and division problems?</i>
18	Module 3	Remainders, Estimating, and Problem Solving; Module 3 Assessment	Lessons 21–24: Remainders, Estimating, and Problem Solving Module 3 Assessment	<i>What does a remainder represent?</i> <i>How does the context of a problem determine how a remainder should be interpreted?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Division of Tens and Ones by One-Digit Numbers (Weeks 10–11)	Use place value disks to physically divide tens and ones into equal groups, modeling each step before recording the equation.	Solve division problems mentally using place value reasoning without disks; explain the strategy in writing.
Problem Solving with Measurement (Weeks 11, 17)	Provide a reference chart of customary/metric unit relationships; solve one-step problems before combining into two-step problems.	Solve multi-step measurement problems involving unit conversions and one of the four operations; write an original measurement word problem.
Factors and Multiples (Weeks 12–13)	Use arrays or grouped counters to find factor pairs for a number hands-on; use a hundreds chart to find multiples by skip counting.	Determine whether a number is prime or composite and justify using factor pairs; find the greatest common factor of two numbers using known facts.
Multiplication/Division by Multiples of 10, 100, 1,000 (Week 14)	Use place value disks to model multiplying single digits by multiples of ten before extending to hundreds and thousands.	Multiply/divide larger numbers by multiples of 10, 100, and 1,000 mentally using place value patterns; explain the pattern in writing.
Division of Thousands, Hundreds, Tens, and Ones (Weeks 14–15)	Use place value disks alongside the division algorithm, modeling each step (divide, multiply, subtract, bring down) explicitly.	Divide four-digit numbers by a one-digit divisor using partial quotients or the standard algorithm; explain and interpret any remainder.
Multiplication of up to Four-Digit Numbers by One-Digit Numbers (Weeks 15–16)	Use an area model with each place value part labeled separately before combining partial products.	Use the standard algorithm alongside the area model and compare efficiency; solve problems with larger four-digit factors.
Multiplication of Two-Digit by Two-Digit Numbers (Weeks 16–17)	Use an area model divided into four parts (tens $\times$ tens, tens $\times$ ones, ones $\times$ tens, ones $\times$ ones) with each partial product labeled.	Use the standard algorithm and explain how it connects to the area model's partial products; solve problems with larger two-digit factors.
Remainders, Estimating, and Problem Solving (Week 18)	Use physical objects to act out a division story with leftovers, discussing what the leftover means in context (round up, round down, or keep as a remainder).	Solve real-world problems requiring interpretation of the remainder in different ways for different contexts; estimate quotients before dividing and check reasonableness.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (place value disks, area models, arrays) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "factor," "multiple," "partial quotient," and "remainder" — using visuals and hands-on modeling before the whole-group lesson.
- Anchor new multiplication/division strategies to known facts and smaller numbers before extending to multi-digit numbers.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on multiplication or division tasks.
- Break multi-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend multiplication/division problems to larger numbers or require multiple regroupings.
- Ask students to justify in writing why one strategy (area model, standard algorithm, partial quotients) is more efficient than another for a given problem.
- Challenge students to represent the same product or quotient multiple ways (area model, equation, partial products) and explain the connections.
- Have students create original word problems that require a specific strategy or remainder interpretation.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "factor," "multiple," "remainder," "quotient") with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "I know $__ \times __$, so $__$ must be $__$." or "The remainder means $__$ because $__$."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 4: **Mathematics**

Quarter 3: Curriculum & Pacing Guide

Quarter Overview

Students deepen their understanding of fractions by using visual models and number lines to generate equivalent fractions, compare fractions, and decompose fractions into sums of unit fractions. They add and subtract fractions and mixed numbers with like denominators and multiply fractions by whole numbers.

Students then connect fractions with denominators of 10 and 100 to decimal notation. They read, write, model, compare, and order decimal fractions and use place-value reasoning to understand the relationship among ones, tenths, and hundredths. Throughout the units, students solve real-world problems and use models, equations, benchmark numbers, and mathematical language to explain their reasoning.

Essential Questions

- How can visual models and number lines help us understand fractions?
- How can different fractions represent the same quantity?
- How can we generate and recognize equivalent fractions?
- How can benchmark fractions help us compare fractions?
- Why must fractions refer to the same whole when they are compared?
- How can a fraction be decomposed into a sum of smaller fractions?
- How is a fraction greater than one related to a mixed number?
- How can we add and subtract fractions and mixed numbers with like denominators?
- How can multiplication represent repeated addition of a fraction?
- How can we multiply a fraction by a whole number?
- How are fractions with denominators of 10 and 100 connected?
- How are fractions and decimals related?
- How does place value extend from whole numbers to tenths and hundredths?
- How can decimal fractions be represented with models, number lines, words, and symbols?
- How can we compare and order decimals?
- How can money and measurement contexts help us understand decimals?
- How can we determine whether a fractional or decimal answer is reasonable?
- How can models, equations, and explanations communicate and justify our mathematical reasoning?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them

- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Fourth Grade Quarter 3: *I can statements* (19-27 Weeks)

- I can decompose a fraction into a sum of smaller fractions.
 - I can generate and recognize equivalent fractions.
 - I can compare fractions using benchmark numbers or models.
 - I can add and subtract fractions with like denominators.
 - I can add and subtract mixed numbers with like denominators.
 - I can multiply a fraction by a whole number.
 - I can connect fractions with denominators of 10 and 100 to decimals.
 - I can represent decimals using models, number lines, words, and symbols.
 - I can compare and order decimals.
 - I can determine if a fractional or decimal answer is reasonable.
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Module 4 Reference — Foundations of Fraction Operations (Weeks 19–25)

Standards Addressed

- CC.2.1.4.C.1 — Number & Operations: extend understanding of fraction equivalence and ordering
- CC.2.1.4.C.2 — Number & Operations: build fractions from unit fractions; add and subtract fractions and mixed numbers with like denominators; multiply a fraction by a whole number
- CC.2.4.4.A.4 — Data & Measurement: represent and interpret fractional measurement data using line plots

Vocabulary

Content: common denominator, common numerator, denominator, mixed number, numerator

Familiar: $>$, $=$, $<$ symbols, associative property of addition, associative property of multiplication, data, distributive property, equivalent fraction, fraction form, fraction greater than 1, fractional unit, line plots, multiple, plot, partition, unit form, unit fraction

Academic: no new academic vocabulary introduced

Materials Needed

Chart paper · Colored pencils · Dry erase markers, erasers · Whiteboards · Glue sticks · Index cards · Paper strips (2' × 11') · Paper strips (2 1/8" × 5 1/2") · Pencils · Rulers · Scissors · String

Curriculum Resources

Eureka Math² Module 4 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 4 / Teach Book

Module 5 Reference — Place Value Concepts for Decimal Fractions (Weeks 26–27, continues into Q4)

Standards Addressed

- CC.2.1.4.C.1 — Number & Operations: extend understanding of fraction equivalence, including fractions as decimals
- CC.2.1.4.C.3 — Number & Operations: use decimal notation for fractions with denominators of 10 or 100; compare two decimals to hundredths

Vocabulary

Content: decimal form, decimal fraction, decimal number, decimal, decimal point, hundredths, tenths

Familiar and academic vocabulary for Module 5 continues to be introduced as the module carries into Quarter 4; see the Q4 guide for the complete list.

Materials Needed

Blank paper · Dry erase markers, erasers · Whiteboards · Index cards · Meter stick · Pencils, scissors · String · Eureka Math² deci-disks sets · Decimal place value cards · Place value cards sets · Place value disks sets

Curriculum Resources

Eureka Math² Module 5 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 5 / Teach Book

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
19	Module 4	Foundations of Fraction Operations	Lessons 1–5: Fraction Decomposition and Equivalence MOY MAP Assessment	<i>How can visual models and number lines help us understand fractions? How can a fraction be decomposed into a sum of smaller fractions?</i>
20	Module 4	Foundations of Fraction Operations	Lesson 6: Fraction Decomposition and Equivalence Lessons 7–10: Equivalent Fractions	<i>How can different fractions represent the same quantity? How can we generate and recognize equivalent fractions?</i>
21	Module 4	Foundations of Fraction Operations	Lessons 11–12: Equivalent Fractions Lessons 13–15: Compare Fractions	<i>How can benchmark fractions help us compare fractions? Why must fractions refer to the same whole when they are compared?</i>
22	Module 4	Foundations of Fraction Operations	Lessons 16–17: Compare Fractions Lessons 18–20: Add and Subtract Fractions	<i>How can we add and subtract fractions and mixed numbers with like denominators?</i>
23	Module 4	Foundations of Fraction Operations	Lessons 21–22: Add and Subtract Fractions Lessons 23–25: Add and Subtract Mixed Numbers	<i>How is a fraction greater than one related to a mixed number?</i>
24	Module 4	Foundations of Fraction Operations	Lessons 26–30: Add and Subtract Mixed Numbers	<i>How can we determine whether a fractional or decimal answer is reasonable?</i>
25	Module 4	Repeated Addition of Fractions as Multiplication; Module 4 Assessment	Lessons 31–34: Repeated Addition of Fractions as Multiplication Module 4 Assessment	<i>How can multiplication represent repeated addition of a fraction? How can we multiply a fraction by a whole number?</i>
26	Module 5	Place Value Concepts for Decimal Fractions	Lessons 1–3: Exploration of Tenths	<i>How are fractions with denominators of 10 and 100 connected? How are fractions and decimals related?</i>

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
27	Module 5	Place Value Concepts for Decimal Fractions	Lesson 4: Exploration of Tenths Lessons 5–8: Tenths and Hundredths	<i>How does place value extend from whole numbers to tenths and hundredths?</i> <i>How can decimal fractions be represented with models, number lines, words, and symbols?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Fraction Decomposition and Equivalence (Weeks 19–20)	Use paper strips folded into equal parts to physically decompose a fraction into unit fractions before writing the equation.	Decompose a fraction into unit fractions in more than one way; explain how the decomposition connects to equivalent fractions.
Equivalent Fractions (Weeks 20–21)	Use fraction strips or circles to physically overlay two fractions and see that they cover the same amount; start with familiar pairs ($1/2 = 2/4$).	Generate a set of equivalent fractions for a given fraction using multiplication; explain using a number line why two fractions are equivalent.
Compare Fractions (Weeks 21–22)	Compare fractions with the same denominator or same numerator first using visual models placed side by side.	Compare fractions with different numerators and denominators using benchmark fractions (e.g., $1/2$) or common denominators; justify comparisons in writing.
Add and Subtract Fractions (Weeks 22–23)	Use fraction strips to physically combine or take away like-denominator fractions before recording the equation.	Solve fraction addition/subtraction problems that result in an answer greater than 1; explain how to rewrite the answer as a mixed number.
Add and Subtract Mixed Numbers (Weeks 23–24)	Add/subtract the whole numbers and fraction parts separately using a visual model before combining; keep denominators the same throughout.	Solve mixed number subtraction problems requiring regrouping (e.g., borrowing a whole as a fraction); explain the strategy in writing.
Repeated Addition of Fractions as Multiplication (Week 25)	Use a number line or fraction strips to model repeated addition of the same unit fraction before writing it as multiplication.	Multiply a fraction by a whole number using an equation without a visual model; write and solve an original real-world problem requiring this skill.
Exploration of Tenths (Weeks 26–27)	Use deci-disks or a fraction strip divided into 10 equal parts to connect tenths as a fraction to tenths as a decimal.	Convert between fraction and decimal form for tenths fluently; explain the relationship using place value language.
Tenths and Hundredths (Week 27)	Use a hundredths grid to shade tenths and hundredths, connecting the visual model to the decimal notation each time.	Compare and order decimals to the hundredths place; connect decimal place value to money and measurement contexts.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (fraction strips, deci-disks, number lines) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "equivalent fraction," "unit fraction," and "decimal point" — using visuals and hands-on modeling before the whole-group lesson.
- Keep denominators small and familiar (e.g., halves, fourths, eighths) while a strategy is new, then extend to less familiar denominators.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on fraction or decimal tasks.
- Break multi-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend fraction tasks to less common denominators, or decimal tasks to comparing and ordering several decimals.
- Ask students to justify in writing why two fractions are equivalent or why one comparison strategy is more efficient than another.
- Challenge students to represent the same fraction or decimal multiple ways (fraction, decimal, model, number line) and explain the connections.
- Have students create original word problems (fractions or decimals) for a partner to solve.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "equivalent," "denominator," "decimal," "tenths") with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "___ and ___ are equivalent because ___." or "The digit in the tenths place is ___ because ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 4: **Mathematics**

Quarter 4: Curriculum & Pacing Guide

Quarter Overview

Students extend place-value understanding to tenths and hundredths and connect decimal notation to fractions with denominators of 10 and 100. They read, write, model, compare, order, and add decimal fractions using place-value models, number lines, money, and measurement contexts.

Students then explore geometric figures by identifying and drawing points, lines, line segments, rays, and angles. They measure and draw angles with protractors, compose and decompose angles, determine unknown angle measures, and classify two-dimensional figures according to their sides, angles, parallel or perpendicular lines, and symmetry. Throughout the units, students solve real-world problems and explain their reasoning using models, equations, and precise mathematical language.

Essential Questions

- How are fractions with denominators of 10 and 100 related to decimal numbers?
- How does place value extend to tenths and hundredths?
- How can decimal fractions be represented with models, number lines, words, fractions, and decimal notation?
- How can equivalent fractions help us understand decimal numbers?
- How can we compare and order decimals?
- How can place value help us add tenths and hundredths?
- How can money and measurement help us understand decimal fractions?
- How can we determine whether a decimal answer is reasonable?
- How are points, lines, line segments, rays, and angles related?
- How can angles be identified, described, measured, and drawn?
- How is an angle related to a fraction of a complete turn?
- How can benchmark angles help us estimate angle measures?
- How can angles be composed and decomposed?
- How can addition and subtraction help us determine unknown angle measures?
- How can parallel, perpendicular, and intersecting lines help us describe geometric figures?
- How can attributes such as side lengths and angle measures help us classify triangles and other polygons?
- How can lines of symmetry be identified and drawn?
- How can models, measurements, equations, and explanations communicate and justify our mathematical reasoning?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Fourth Grade Quarter 4: *I can statements* (28-36 Weeks)

- I can compare and order decimals.
 - I can use place value to add tenths and hundredths.
 - I can identify and describe points, lines, line segments, rays, and angles.
 - I can measure and draw angles using a protractor.
 - I can use benchmark angles to estimate angle measures.
 - I can compose and decompose angles.
 - I can use addition and subtraction to find an unknown angle measure.
 - I can describe shapes using parallel, perpendicular, and intersecting lines.
 - I can classify triangles and other polygons by their sides and angles.
 - I can identify and draw lines of symmetry.
-

Module 5 Reference — Place Value Concepts for Decimal Fractions, continued (Weeks 28–29)

Standards Addressed

- CC.2.1.4.C.1 — Number & Operations: extend understanding of fraction equivalence, including fractions as decimals
- CC.2.1.4.C.2 — Number & Operations: build fractions from unit fractions; apply to decimal addition
- CC.2.1.4.C.3 — Number & Operations: use decimal notation for fractions with denominators of 10 or 100; compare two decimals to hundredths
- CC.2.4.4.A.1 — Data & Measurement: convert measurements within a single system, applied to money and decimal contexts

Vocabulary

Content vocabulary was introduced in Quarter 3 (see the Q3 guide) — this quarter adds:

Familiar: denominator, equivalent fraction, expanded form, fraction form, fraction greater than 1, mixed number, numerator, sum, total, unit form

Academic: no new academic vocabulary introduced

Materials & Resources

Materials for this section match Quarter 3's Module 5 list — see the Q3 guide.

Eureka Math² Module 5 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 5 / Teach Book · Eureka Math² deci-disks sets · Decimal place value cards · Place value cards sets · Place value disks sets

Module 6 Reference — Angle Measurements and Plane Figures (Weeks 29–35)

Standards Addressed

- CC.2.3.4.A.1 — Geometry: draw and identify points, lines, line segments, rays, and angles; classify shapes by properties of their lines and angles
- CC.2.3.4.A.2 — Geometry: classify two-dimensional figures by properties of their lines and angles
- CC.2.3.4.A.3 — Geometry: identify a line of symmetry for a two-dimensional figure
- CC.2.4.4.A.6 — Data & Measurement: measure angles and understand angle measure as additive; solve addition/subtraction problems to find unknown angles
- CC.2.2.4.A.1 — Algebraic Concepts: use place value understanding and properties of operations, applied to angle measurement problems

Vocabulary

Content: acute angle, acute triangle, adjacent angle, angle, complementary angles, degree, equilateral triangle, figure, intersect, isosceles triangle, line, line of symmetry, line segment, obtuse angle, parallel, perpendicular, point, ray, reflex angle, right angle, right triangle, scalene triangle, straight angle, supplementary angles, vertex

Familiar: benchmark, decompose, sum

Academic: construct, classify

Materials Needed

4" protractors · Blank paper · Cardstock circles (4" diameter, red and white) · Colored pencils · Dry erase markers, erasers · Whiteboards · Markers · Pencils · Rulers · Scissors · Sticky notes · Toothpicks

Curriculum Resources

Eureka Math² Module 6 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 6 / Teach Book

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
28	Module 5	Place Value Concepts for Decimal Fractions, continued	Lessons 9–11: Comparison of Decimal Numbers Lessons 12–13: Addition of Tenths and Hundredths	<i>How can we compare and order decimals? How can place value help us add tenths and hundredths?</i>
29	Module 5 → 6	Addition of Tenths and Hundredths; Module 5 Assessment; Begin Angle Measurements and Plane Figures	Lesson 14: Addition of Tenths and Hundredths Module 5 Assessment Lessons 1–2: Lines and Angles	<i>How are points, lines, line segments, rays, and angles related?</i>
30	Module 6	Angle Measurements and Plane Figures	Lessons 3–6: Lines and Angles Lesson 7: Angle Measurement	<i>How can angles be identified, described, measured, and drawn? How is an angle related to a fraction of a complete turn?</i>
31	Module 6	Angle Measurements and Plane Figures	Lessons 8–12: Angle Measurement	<i>How can benchmark angles help us estimate angle measures? How can angles be composed and decomposed?</i>
32–33	—	PSSA Assessments	No new content lessons — statewide testing window	<i>Cumulative review and standardized assessment</i>
34	Module 6	Angle Measurements and Plane Figures	Lessons 13–16: Determine Unknown Angle Measures Lesson 17: Two-Dimensional Figures and Symmetry	<i>How can addition and subtraction help us determine unknown angle measures? How can parallel, perpendicular, and intersecting lines help us describe geometric figures?</i>

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
35	Module 6	Two-Dimensional Figures and Symmetry; Module 6 Assessment	Lessons 18–20: Two-Dimensional Figures and Symmetry Module 6 Assessment	How can attributes such as side lengths and angle measures help us classify triangles and other polygons? How can lines of symmetry be identified and drawn?
36	—	End of Year Review and Assessments	EOY Review and MAP Assessments	Cumulative review and year-end growth assessment

Note: Weeks 32–33 are a combined testing window (PSSA Assessments) with no new content lessons.

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Comparison of Decimal Numbers (Week 28)	Use place value disks or a hundredths grid to build each decimal and compare tenths first, then hundredths, with teacher modeling.	Compare decimals given in different forms (fraction, word, decimal) without converting both to the same form first; order a set of decimals.
Addition of Tenths and Hundredths (Weeks 28–29)	Use deci-disks to physically combine tenths and hundredths, regrouping 10 hundredths into a tenth when needed, before recording the equation.	Add decimals mentally using place value reasoning; solve real-world problems involving money that require adding tenths and hundredths.
Lines and Angles (Weeks 29–30)	Use real objects (rulers, toothpicks) to physically build and label points, lines, line segments, rays, and angles; use a checklist matching term to picture.	Identify and draw all the geometric elements (points, lines, angles) within a complex figure; explain the difference between a line, ray, and line segment in writing.
Angle Measurement (Weeks 30–31)	Use a physical protractor with the zero line highlighted; measure benchmark angles (90° , 180°) before measuring non-benchmark angles.	Compose and decompose angles by measuring the parts and finding the whole (or vice versa); estimate an angle measure before measuring and check accuracy.
Determine Unknown Angle Measures (Week 34)	Use a drawn diagram with known angle measures labeled; model writing an addition or subtraction equation for the unknown angle step by step.	Solve multi-step unknown angle problems involving several angles; write an original angle word problem for a partner to solve.
Two-Dimensional Figures and Symmetry (Weeks 34–35)	Use cardstock circles or shape cutouts to physically fold and find lines of symmetry; sort triangles by one attribute (side length or angle type) at a time.	Classify triangles and other polygons using multiple attributes at once (side length AND angle type); find all lines of symmetry in a complex figure and justify.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (deci-disks, protractors, shape cutouts) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new geometry terms like "perpendicular," "complementary," and "line of symmetry" — using visuals and hands-on modeling before the whole-group lesson.
- Keep decimal place values or angle measures within a smaller, familiar range while a skill is new, then extend once secure.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on decimal or geometry tasks.
- Break multi-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend decimal tasks to comparing/ordering several decimals, or angle tasks to multi-step unknown-angle problems.
- Ask students to justify in writing why a comparison, classification, or angle strategy is correct.
- Challenge students to represent the same decimal or angle multiple ways (model, equation, drawing) and explain the connections.
- Have students create original word problems (decimals or angles) for a partner to solve.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "perpendicular," "symmetry," "decimal," angle/triangle names) with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "This angle measures ___ degrees because ___." or "These two decimals are equal because ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.