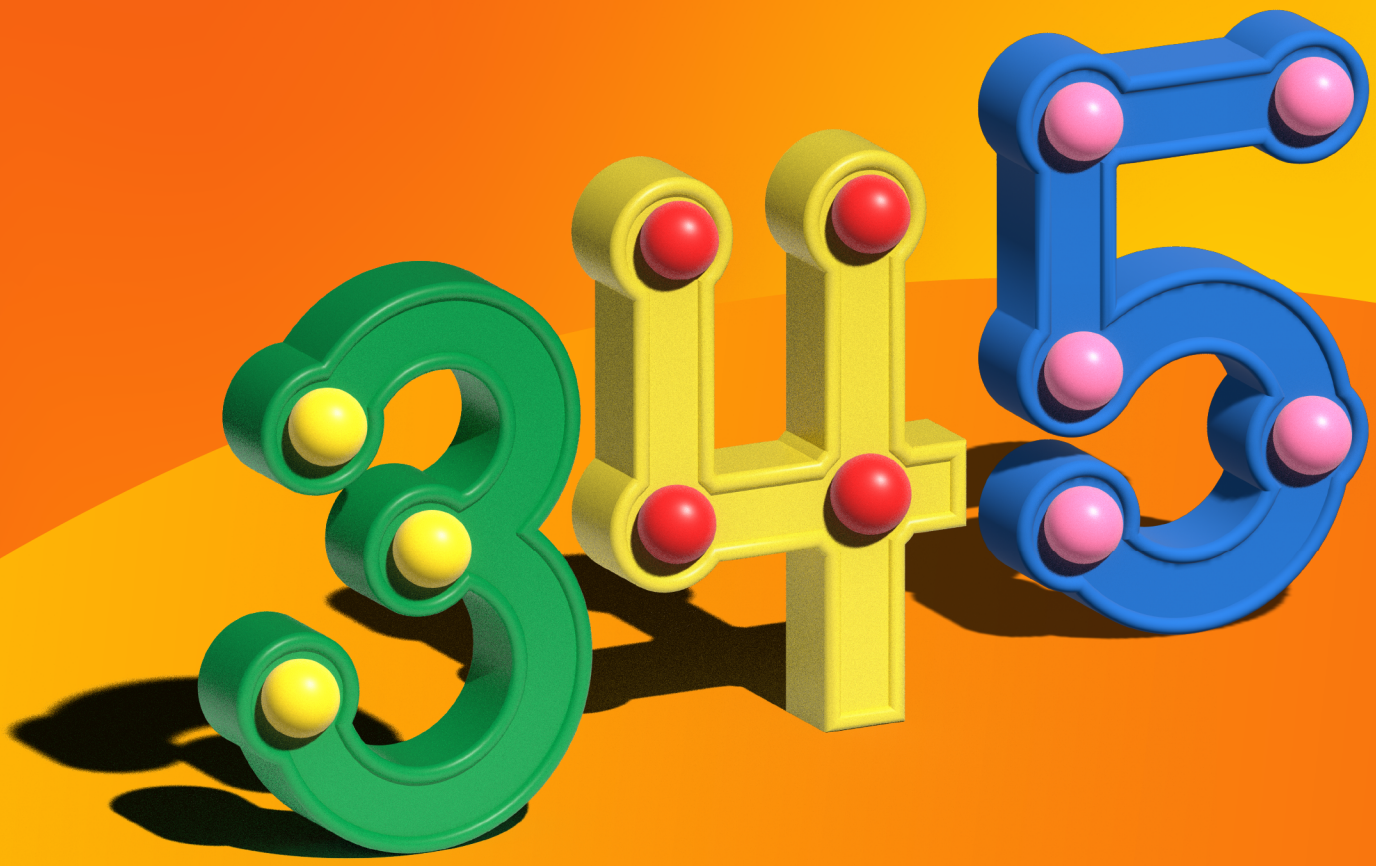
TouchMath for Grades 3-5

Program Sampler



TOUCHMATH®

TOUCHMATH®

For over 50 years, TouchMath®, a pioneer in math education, has positively impacted students across the country with its explicit, systematic multisensory math solution. Through our research-based methods and engaging materials we transform the way math is taught, empowering students to build confidence and develop foundational math skills.

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- Program Components 2
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ABOUT TOUCHMATH

TouchMath is an explicit, multisensory math program for students in grades PreK - 12 who struggle with foundational math and abstract concepts. Our differentiated math solution is tailored to meet the unique and diverse needs of all students.

The TouchMath program includes validated screeners, a proven multisensory, hands-on curriculum, easy-to-use progress monitoring and robust reporting and data.

TouchMath is endorsed by the Council of Administrators of Special Education (CASE). It's used in self-contained, resource, and inclusion classrooms throughout the country.

ABOUT THIS GUIDE

This collection of TouchMath lessons and student activity sheets provides a small representation of the TouchMath program. The resources included in this sample collection are available within the TouchMath Print or Blended Solutions.

Register for a free 14-day trial of the TouchMath Blended Solution at mytouchmath.com/freetrial. Access a sample of the TouchMath program, interactive practice and games, reporting, and so much more!

For more information, please visit touchmath.com.

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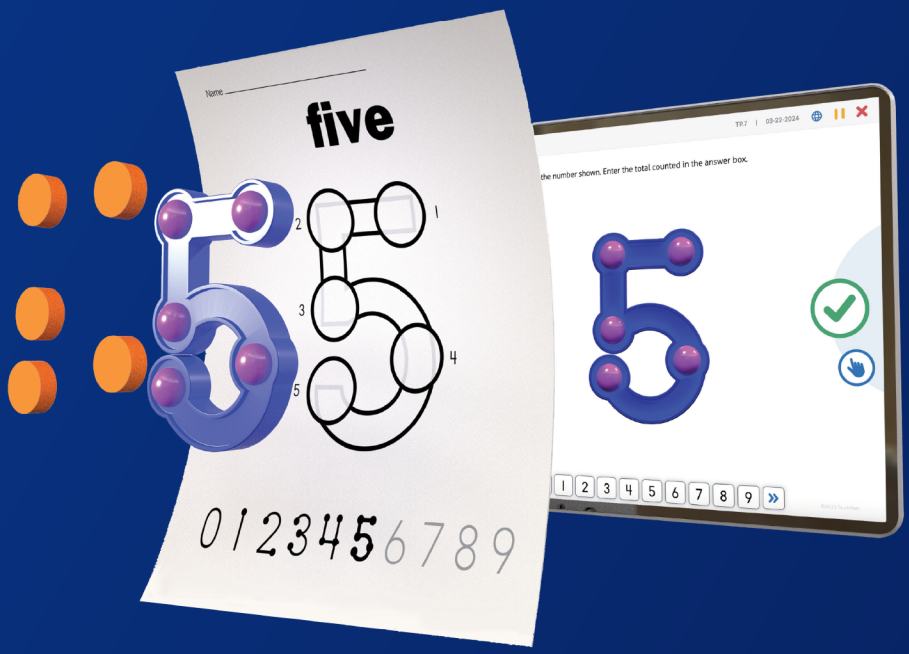
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TouchMath Methodology

CRA

TouchMath is grounded within the Concrete-Representational-Abstract (CRA) Continuum. The multisensory curriculum uses scientifically designed manipulatives, including its signature TouchPoints® on numerals, to transform abstract concepts into concrete, visual, and tactile learning experiences that enhance understanding and accessibility.



UNIVERSAL DESIGN FOR LEARNING

The Universal Design for Learning (UDL) plays a pivotal role in the TouchMath Program. UDL is derived from research-based best practices in cognitive neuroscience and takes into account the diversity of learners physiologically, psychologically, and socioemotionally. An overview of the three main UDL principles is included at the beginning of each teacher guide, and is notated at the top of every student activity sheet master.

STANDARDS OF MATHEMATICAL PRACTICE

TouchMath integrates the Standards of Mathematical Practice (SMP) into its teaching and learning methodology by embedding the key processes and proficiencies outlined in the SMP throughout its instructional approach. These eight practices—focused on problem-solving, reasoning, communication, and conceptual understanding—are consistently represented across each teacher guide, ensuring that students engage in meaningful mathematical thinking and develop the skills necessary.

ENDORSED BY

CASE Council of Administrators of Special Education

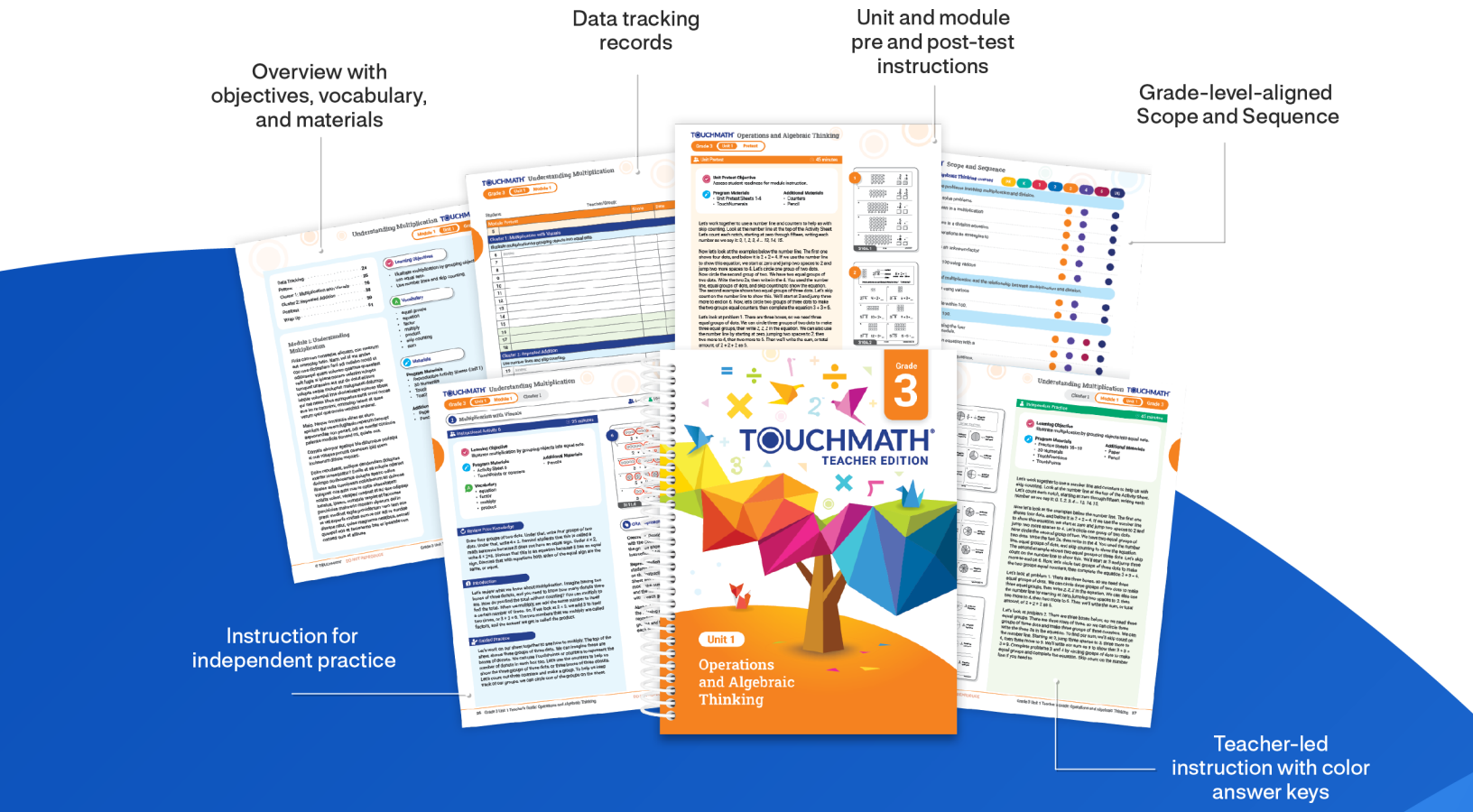
National Center on INTENSIVE INTERVENTION at the American Institutes for Research

Program Components

TEACHER EDITION

The Teacher Edition includes everything a teacher needs to effectively deliver multisensory math instruction. Each guide begins with an introduction to the TouchMath approach and research-based strategies to support instruction.

Unit overviews clearly define each module of instruction with detailed objectives, math vocabulary, and more. Lessons include a suggested script that provides explicit instructions on how to support and guide student learning using corresponding student activity sheets.

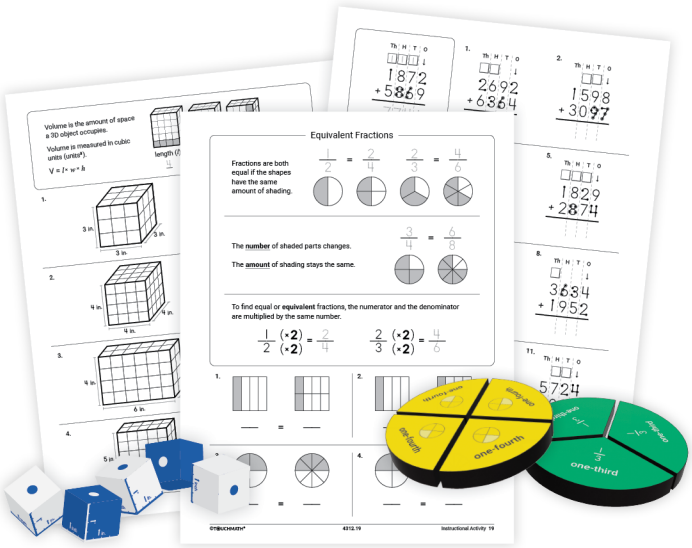


The TouchMath program includes a Teacher Edition, student activity sheets, instructional supports, and a collection of multisensory hands-on manipulatives. The Blended Solution includes an academic screener, automated progress monitoring, online practice and games, and robust reporting.



STUDENT ACTIVITY SHEETS

TouchMath student activity sheets are carefully sequenced and designed to support teacher-led instruction. Each student activity sheet is systematically scaffolded, building upon foundational skills with repeated opportunities that promote skill mastery and generalization.



PROPRIETARY, HANDS-ON MANIPULATIVES

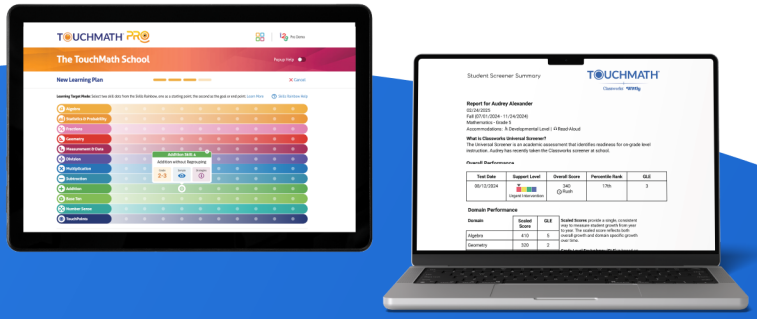
Easily make abstract math concepts more accessible with multisensory math manipulatives. Included with both Print and Blended Solutions, TouchMath manipulatives are scientifically designed to correlate with student activity sheets and intervention components, providing a concrete, hands-on learning experience that is proven to accelerate learning.

DIGITAL PRACTICE AND GAMES

TouchMath's online games and math practice increase engagement and build confidence and math comprehension. The TouchMath Skills Rainbow makes it easy to personalize lessons for students.

Available in English and Spanish and accessible on any device.



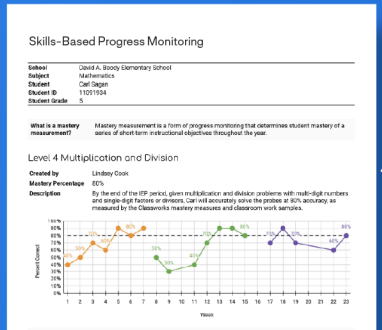


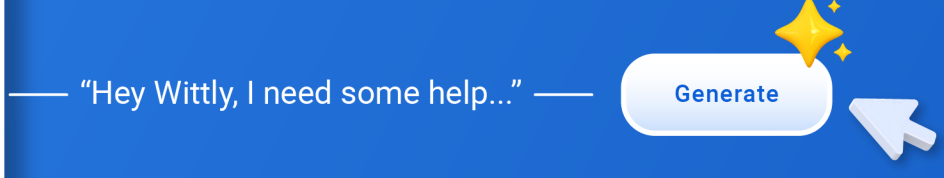
AI-POWERED PROGRESS MONITORING

Skills-Based Progress Monitoring leverages Wittly, our AI-powered assistant, to simplify measuring and documenting progeess on IEPs and interventions.

ACADEMIC SCREENER

TouchMath Math Screener for grades K-12 pinpoints areas of strength and weakness to easily determine where each student should be placed within TouchMath's curriculum.





Teacher Edition

STRATEGICALLY SCAFFOLDED UNITS, MODULES, AND CLUSTERS OF INSTRUCTION

Much more than numbers and manipulatives, TouchMath empowers educational teams with a powerful solution that uses explicit, systematic multisensory instruction and the CRA approach that is proven to positively impact math achievement across all settings. A detailed scope and sequence outlines the progression of math concepts and standards-aligned skills across all grades in the TouchMath solution.



GRADE 3: 700+ instructional activities

- Unit 1: Operations and Algebraic Thinking
- Unit 2: Number and Operations in Base Ten
- Unit 3: Number and Operations – Fractions
- Unit 4: Geometry, Measurement, and Data

GRADE 4: 700+ instructional activities

- Unit 1: Operations and Algebraic Thinking
- Unit 2: Number and Operations in Base Ten
- Unit 3: Number and Operations – Fractions
- Unit 4: Geometry, Measurement, and Data

GRADE 5: 700+ instructional activities

- Unit 1: Operations and Algebraic Thinking
- Unit 2: Number and Operations in Base Ten
- Unit 3: Number and Operations – Fractions
- Unit 4: Geometry, Measurement, and Data

SCAN TO VIEW
the complete TouchMath Scope and Sequence.

Guided instruction visual features

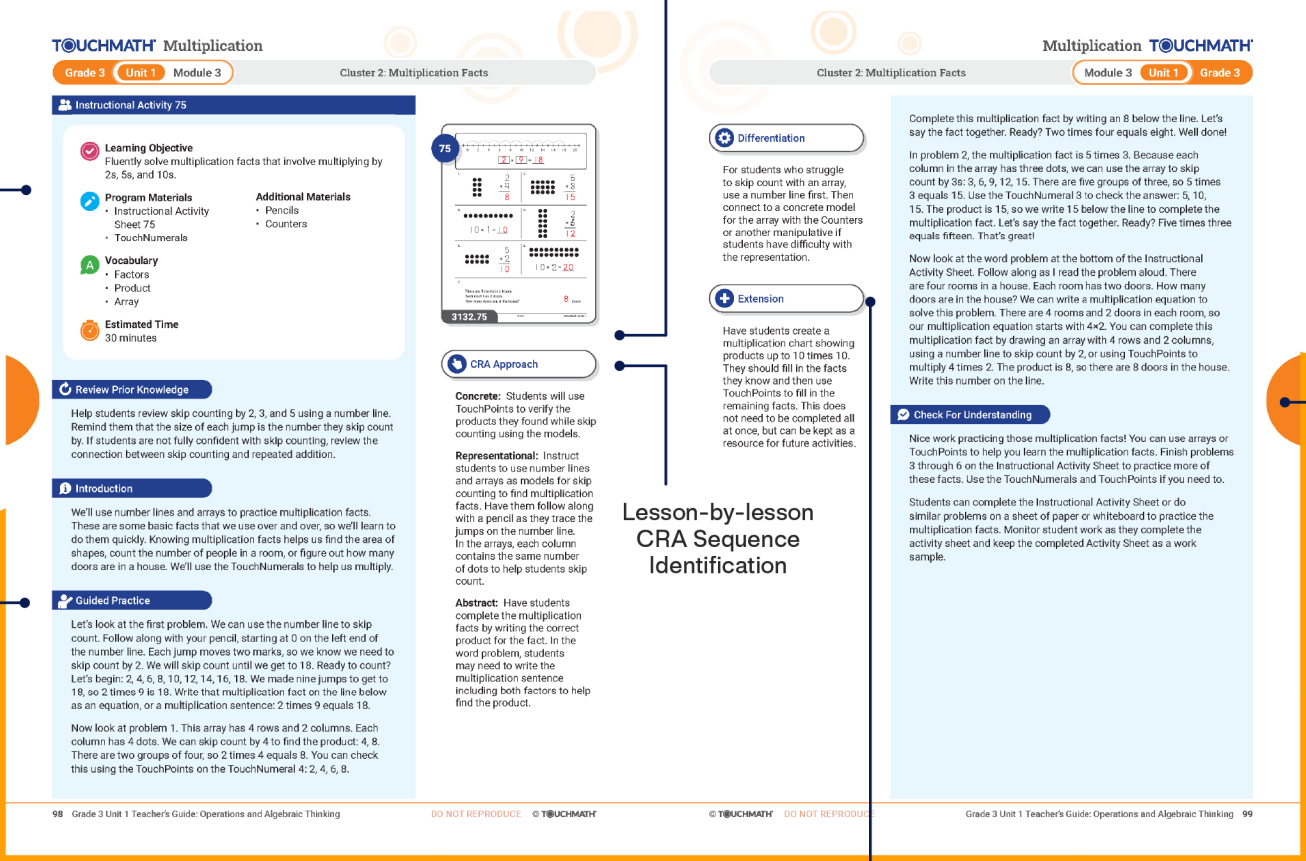
Each Teacher Edition helps educators teach with ease by presenting page-by-page instruction with clearly defined objectives, suggested script, materials, vocabulary words, color answer keys, and callouts for multisensory engagement, including:

- Learning Objectives
- Materials
- Check For Understanding
- Math Talk
- Vocabulary
- Real World Connections
- Metacognitive Strategies
- Estimated Time
- Independent Practice
- Peer to Peer

Modules are broken into clusters for targeted skill focus

Answer sheet thumbnails with answer key

Easy navigation with printed module tabs



Lesson-by-lesson CRA Sequence Identification

Guided teacher dialogs and activity sheet directions

Extension recommendations to build deeper math comprehension

Student Activity Sheets

Each TouchMath unit contains reproducible (print) or printable (digital) student activity sheets, which are organized by skill into modules. Activities are aligned with state and extended standards and incorporate TouchMath manipulatives and common classroom materials where appropriate.

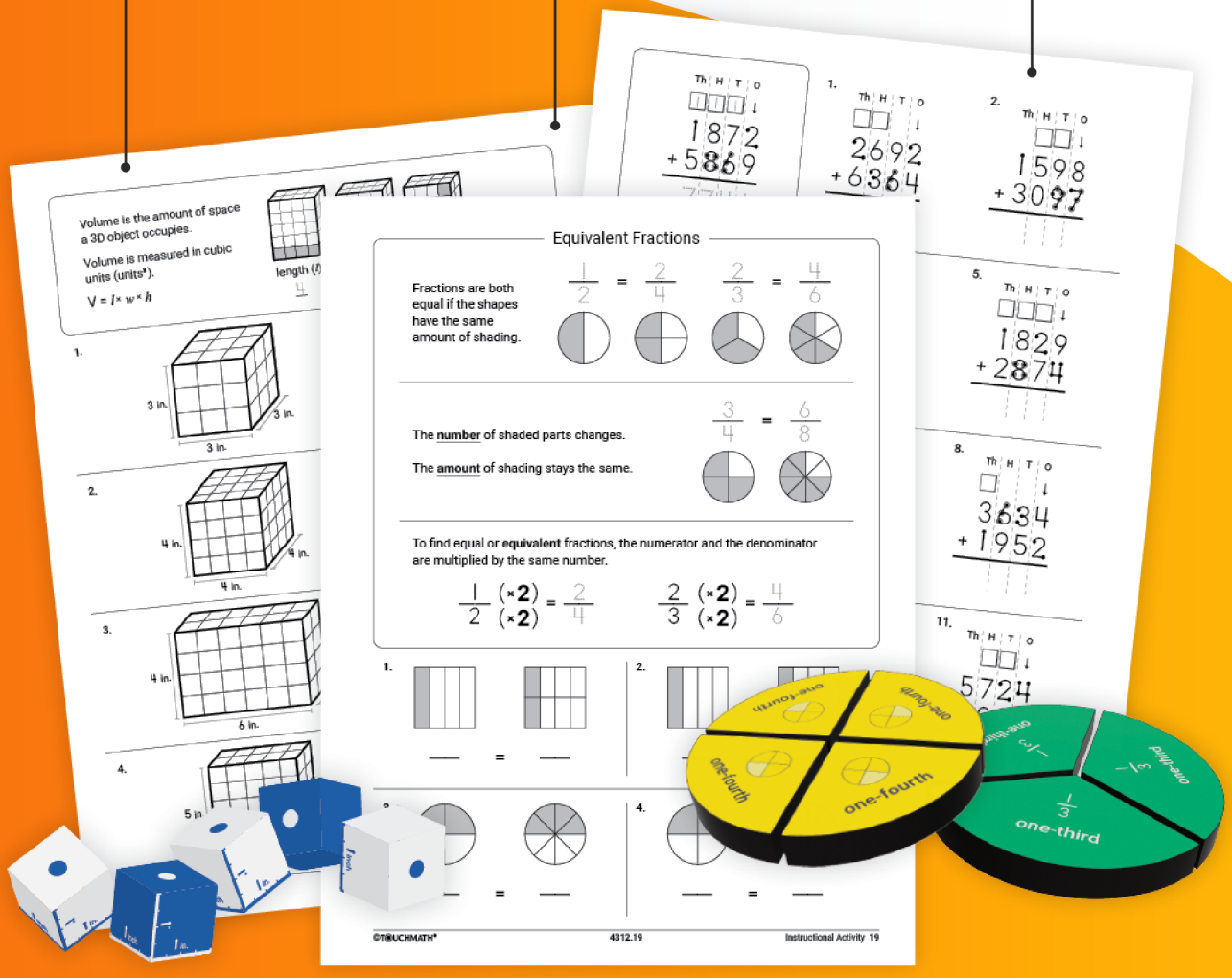
They feature opportunities to discuss and build mathematical language naturally and allow students the necessary space to develop tactile skills as they master new concepts.

As students see, say, hear, and touch while they practice math, they learn and remember. Color thumbnail answer keys to all activity sheets can be found in the teacher's guide alongside the instructional strategies.

Cues and models make concepts accessible

Pairs with TouchMath manipulatives

Designed for clarity, Activity Sheets maintain a clean, distraction-free layout.





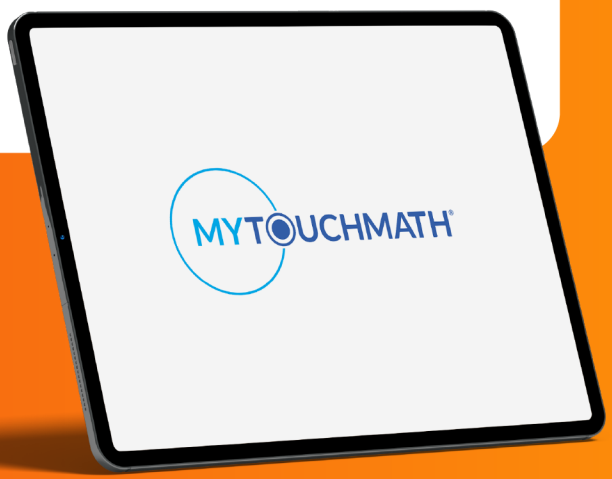
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3. You will receive an activation email. Click the provided link to set your password and activate your trial account.
4. Go to mytouchmath.com to log in.
5. Enjoy your free trial of MyTouchMath for 14 days!

Feel free to chat with us from within MyTouchMath using the orange Help bubble if you have any questions or if you'd like a success specialist to contact you.



Sample Instructional Activity 5

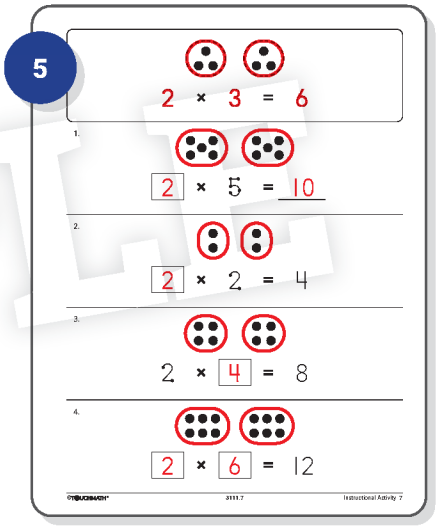
Learning Objective
Fluently solve multiplication facts that involve multiplying by two.

Program Materials
- Sample Activity Sheet 5
- TouchNumerals
- TouchUnit Counters

Additional Materials
- Pencils

Vocabulary
- factor
- product
- array

Estimated Time
20 minutes



SAMPLE
©TOUCHMATH

Introduction

Let's review what we know about multiplying by 2. Imagine you have 2 baskets, and each basket has 4 apples. Instead of counting every apple one by one, you can multiply to find the total. When we multiply by 2, we're doubling the number, or adding it to itself once. So, 2 × 4 means 4 + 4, which equals 8. The numbers we multiply are called factors, and the answer we get is called the product.

Guided Practice

Let's use the Counters to help us show the three groups of two dots, or three pairs of two shoes. Watch as I use counters to represent the problem. Once I have my sets created, I can combine the sets to solve for the final product. I can create three groups of two counters. Two, four, six. 3 × 2 equals 6. Let's do the next problem together. Say or touch problem 2. 2 × 5 equals how many? Let's use counters and skip count to find the answer. As you create groups, combine sets, or skip count to solve, use the think-a-loud process and model for your students how you work through the problem. For example, explain your thought process and reasoning by saying, I created two groups of two counters to represent 2 x 2. To solve for the final answer, I combine the two groups and count, or I can skip count using the groups as a model, two, four.

Check For Understanding

Monitor student work as they use the Counters to complete the Instructional Activity Sheet. Observe as students complete the missing numeral on the activity sheet and ensure they following the correct steps to solve the problems. Keep the completed activity sheet as a permanent work sample.

Specific Feedback

When giving specific verbal feedback, specifically highlight what the student did independently, referencing the visual support (groups of dots), and gives clear affirmation while also reinforcing the connection between the visual representation and the multiplication sentence.

Extension

Give students a pretend shopping list with different classroom items (e.g., 1 pencil, 2 erasers, 3 glue sticks). Tell them they need to buy double the amount of each item for a class project. Have students use multiplication by 2 to figure out how many of each item they need. For example, 2 × 3 = 6 glue sticks. Students can record their answers on a chart and draw or cut out pictures to match their totals.



2 × 3 = 6

1.



□ × 5 = ____

2.



□ × 2 = 4

3.



2 × □ = 8

4.



□ × □ = 12

Sample Instructional Activity 6

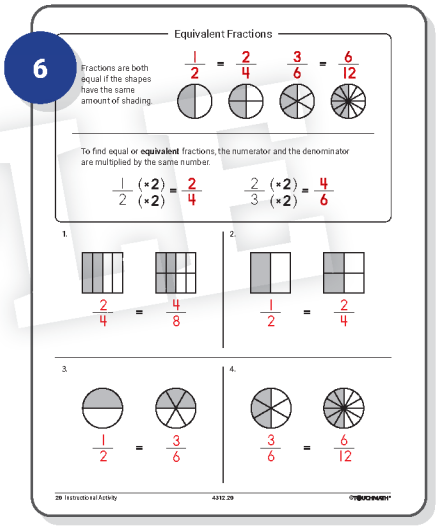
Learning Objective
Fluently solve multiplication facts that involve multiplying by two.

Program Materials
- Sample Activity Sheet 6
- TouchFractions
- TouchUnit Counters

Additional Materials
- Pencils

Vocabulary
- divide
- equivalent fractions
- multiply
- numerator

Estimated Time
20 minutes



Introduction

Today, we're going to explore how different fractions can represent the same amount. We'll use FractionShapes to compare 1/2 and 2/4 and see how they show the same part of a whole. Let's look closely at the shapes and explain how 1/2 and 2/4 are equal. Understanding equivalent fractions helps us solve real-world problems, like sharing or measuring things fairly.

Guided Practice

Let's make our own equivalent fractions. Write the fraction 1/2 on the board. Ask students, How can I create a fraction that is equivalent to 1/2? I can use multiplication to make an equivalent fraction. I have to multiply both the numerator and the denominator by the same number. Show students the top of the Instructional Activity Sheet. It shows three ways to solve for equivalent fractions. Model each way for your students. Have students use each method to write fractions in the appropriate spaces on the sheet. Provide FractionShapes to help students visualize these relationships. For some students, hands-on comparison can help them see how the shaded areas remain equal even when the number of parts changes.

Check For Understanding

Monitor students' work as they complete the Instructional Activity Sheet and keep the completed activity sheet as a work sample. Ask guiding questions such as, How do you know these two fractions are equal? or What did you multiply to get this equivalent fraction? Provide immediate feedback or reteach in small groups as needed.

Real Word Application

Use real-life examples to help students see equivalent fractions in action. For instance, if students are served personal pizzas in the cafeteria, demonstrate with two pizzas. Cut one pizza into 4 slices and the other into 8. Show that ½ of each pizza is the same amount of food, even though one pizza has 2 out of 4 slices and the other has 4 out of 8 slices.

Extension

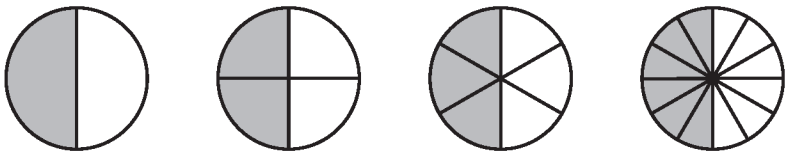
Have students create an Equivalent Fractions Match-Up game using index cards. On each card, have students write one fraction and decorate it with a quick sketch of a fraction bar or circle model. Then, challenge students to work in pairs to match cards that show equivalent values and explain their reasoning. To extend further, students can use multiplication to create a new equivalent fraction for each match they find.

SAMPLE
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Equivalent Fractions

Fractions are both equal if the shapes have the same amount of shading.

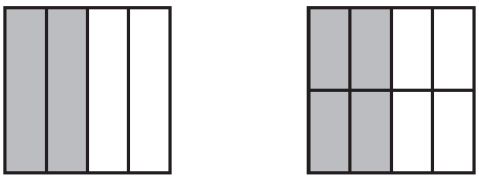
$\frac{1}{2} = \frac{2}{4}$ $\quad \frac{3}{6} = \frac{6}{12}$



To find equal or **equivalent** fractions, the numerator and the denominator are multiplied by the same number.

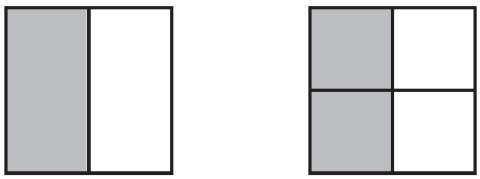
$\frac{1}{2} \ \frac{(\times 2)}{(\times 2)} = \frac{2}{4}$ $\qquad \frac{2}{3} \ \frac{(\times 2)}{(\times 2)} = \frac{4}{6}$

1.



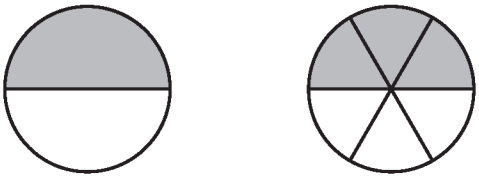
___ = ___

2.



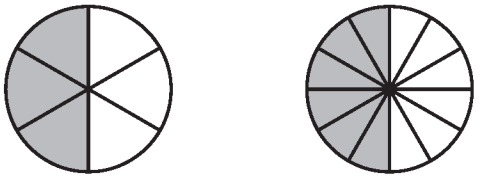
___ = ___

3.



___ = ___

4.



___ = ___

Sample Instructional Activity 7

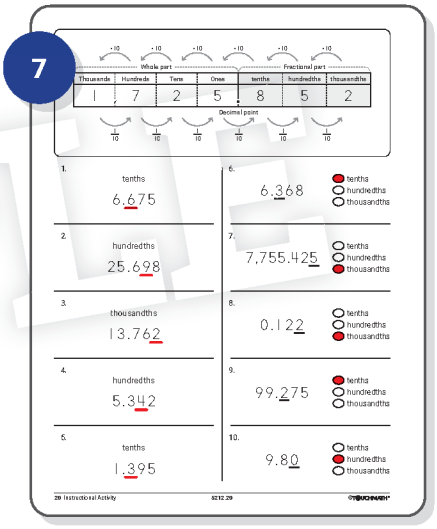
Learning Objective
Understand and identify the place value of digits in decimal numbers to the thousandths place.

Program Materials
- Sample Activity Sheet 7

Additional Materials
- Base ten blocks
- Colored pencils
- Paper
- Pencils

Vocabulary
- decimal
- place value
- thousandths place

Estimated Time
20 minutes



Introduction

Today, we're going to explore decimal numbers and learn how to identify the place value of each digit—especially digits in the tenths, hundredths, and thousandths places. Understanding place value helps us read, write, and compare decimal numbers correctly. We'll look at a place-value chart, practice saying decimals aloud, and figure out the value of each digit based on its position.

Guided Practice

Take a look at the place-value chart on your Instructional Activity Sheet. Notice the arrows labeled "×10" moving from right to left—this shows that each place is 10 times greater than the place to its right. For example, 7 tenths is 10 times the value of 7 hundredths. Now look at the arrows labeled "1/10" going from left to right. This means each place is one-tenth the value of the place to its left. So, 7 tenths is one-tenth the value of 7 ones. Look at Problem 1 on your activity sheet. The decimal is 2.675. You can say this decimal in two ways. You can say "two point six seven five." Let's say this together: "two point six seven five." You can also say two and six hundred and seventy-five thousandths. Let's say this together. Two and six hundred and seventy-five thousandths. Great work! Guide students through the remaining questions on the worksheet, having students determine the value of digits in different places in decimals.

Check For Understanding

Monitor students' work as they complete the Instructional Activity Sheet and keep the completed activity sheet as a work sample. Help students with decimals that have a 0. Reinforce that 0 is a placeholder using base ten pieces to model examples of thousandths-place decimals with 0 in a place.

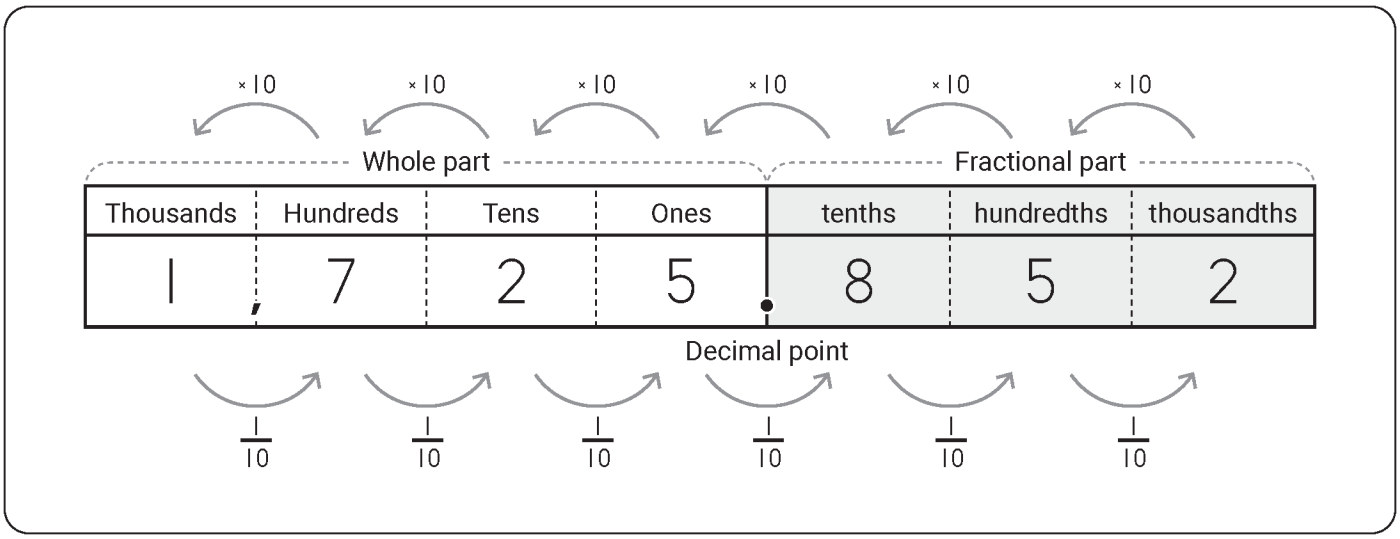
Hands-On

Use base ten blocks to make decimal place value visual and hands-on. Students can represent tenths, hundredths, and thousandths using flat mats, rods, and small cubes to see how each place is 10 times larger or smaller than the next.

Extension

After students have learned to identify the place value of digits in decimal numbers to the thousandths place, challenge them to become "Decimal Detectives." Give each student a number (e.g., 3.728) and ask them to write three clues about the digits' place values (e.g., the digit in the hundredths place is double the digit in the thousandths place). Students then swap clues with a partner and try to guess each other's numbers. This reinforces understanding of place value through reasoning and comparison.

SAMPLE
©TOUCHMATH



1.

tenths

6.675

2.

hundredths

25.698

3.

thousandths

13.762

4.

hundredths

5.342

5.

tenths

1.395

6.

6.368

- ◯ tenths
- ◯ hundredths
- ◯ thousandths

7.

7,755.425

- ◯ tenths
- ◯ hundredths
- ◯ thousandths

8.

0.122

- ◯ tenths
- ◯ hundredths
- ◯ thousandths

9.

99.275

- ◯ tenths
- ◯ hundredths
- ◯ thousandths

10.

9.80

- ◯ tenths
- ◯ hundredths
- ◯ thousandths

TOUCHMATH Scope and Sequence

	3	4	5
Operations and Algebraic Thinking			
Work with equal groups of objects to gain foundations for multiplication.			
Multiply within 100 to solve problems.	●	●	
Represent and solve problems involving multiplication and division.			
Divide within 100 to solve problems.	●	●	
Determine the unknown in a multiplication equation.	●	●	
Determine the unknown in a division equation.	●	●	
Apply properties of operations as strategies to multiply and divide.	●	●	
Understand division as an unknown-factor problem.	●	●	
Fluently multiply within 100 using various strategies and models.	●	●	
Understand properties of multiplication and the relationship between multiplication and division.			
Fluently divide within 100 using various strategies and models.	●	●	
Fluently multiply and divide within 100.	●	●	
Multiply and divide within 100.			
Solve two-step problems using the four operations and a range of models.	●	●	●
Represent the unknown in an equation with a letter or symbol.	●	●	●
Use estimation strategies to solve equations.	●	●	
Solve problems involving the four operations, and identify and explain patterns in arithmetic.			
Identify arithmetic patterns.	●	●	
Explain arithmetic patterns using properties of operations.	●	●	
Interpret multiplication as a comparison.	●	●	
Solve problems involving multiplicative comparison.	●	●	
Distinguish multiplicative comparison from additive comparison.	●	●	

Operations and Algebraic Thinking continued

	3	4	5
Use the four operations with whole numbers to solve problems.			
Solve multi-step problems with whole numbers using the four operations.	●	●	●
Find all factor pairs for a whole number up to 100.	●	●	
Recognize that a whole number is a multiple of each of its factors.	●	●	
Determine whether a given number is prime or composite.		●	
Gain familiarity with factors and multiples.			
Generate a number or shape pattern that follows a given rule.	●	●	●
Identify features of a pattern that are not explicit in the rule.		●	●
Use parentheses, brackets, or braces in numerical expressions.		●	●
Generate and analyze patterns.			
Recognize simple patterns and predict the extension of a pattern.	●		
Generate a number or shape pattern that follows a given rule.	●		
Evaluate expressions with parentheses, brackets, or braces.		●	
Write simple expressions that record calculations with numbers.		●	
Write and interpret numerical expressions.			
Generate two numerical patterns using two given rules.			●
Identify relationships between corresponding terms.			●
Form ordered pairs from two patterns.			●
Analyze patterns and relationships.			
Graph ordered pairs on a coordinate plane.			●
Compose numbers from 11 to 19.			●
Decompose numbers from 11 to 19.			●
Graph ordered pairs on a coordinate plane.			●

	3	4	5
Number and Operations in Base Ten			
Understand place value.			
Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and one-tenth of what it represents in the place to its left.			●
Explain patterns in the number of zeros of the product when multiplying a number by powers of 10.			●
Use whole-number exponents to denote powers of 10.			●
Read, write, and compare decimals to the thousandths.			●
Use place value understanding to round decimals to any place.			●
Use place value understanding and properties of operations to perform multi-digit arithmetic.			
Use place value understanding to round whole numbers to the nearest 10 or 100.	●		
Fluently add and subtract within 1,000 using a range of strategies and models.	●		
Multiply one-digit whole numbers by multiples of 10 in the range 10–90.	●		
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.	●		
Generalize place value understanding for multi- digit whole numbers.			
Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.	●	●	●
Compare two multi-digit numbers based on the meanings of the digits in each place, using >, =, and < symbols.	●	●	●
Use place value understanding to round multi-digit whole numbers.	●	●	●
Perform operations with multi-digit whole numbers and with decimals to hundredths.			
Add, subtract, multiply, and divide decimals to hundredths.			●

	3	4	5
Number and Operations – Fractions			
Develop understanding of fractions as numbers.			
Understand what a fraction is.	●	●	●
Represent fractions on the number line.	●	●	●
Relate whole numbers and fractions.	●	●	●
Recognize and generate simple equivalent fractions.	●	●	●
Express whole numbers as fractions.	●	●	●
Recognize fractions that are equivalent to whole numbers.	●	●	●
Compare two fractions with the same numerator.	●	●	●
Compare two fractions with the same denominator.	●	●	●
Compare two fractions using the symbols >, =, or <.	●	●	●
Extend understanding of fraction equivalence and ordering.			
Explain the equivalence of fractions.	●	●	●
Relate fraction equivalence to size.	●	●	●
Relate fraction equivalence to the number line.	●	●	●
Generate equivalent fractions.		●	●
Extend understanding of fraction equivalence and ordering.			
Explain fraction equivalence.		●	●
Express fractions with a denominator of 10 as equivalent fractions with a denominator of 100.		●	●
Build fractions from unit fractions.			
Understand a fraction with as a sum of fractions with numerator 1 and denominator .		●	●
Understand addition and subtraction of fractions as joining and separating parts that refer to the same whole.		●	●
Add and subtract mixed numbers with like denominators.		●	●

Number and Operations – Fractions continued

	3	4	5
Operations with fractions.			
Add fractions with like denominators.		●	●
Add mixed numbers with like denominators.		●	●
Subtract fractions with like denominators.		●	●
Subtract mixed numbers with like denominators.		●	●
Solve problems involving the addition and subtraction of fractions.		●	●
Add fractions with unlike denominators.		●	●
Subtract fractions with unlike denominators.		●	●
Solve problems involving the addition of fractions with unlike denominators.		●	●
Solve problems involving the subtraction of fractions with unlike denominators.		●	●
Multiply a fraction by a whole number.		●	●
Multiply fractions.		●	●
Interpret multiplication as scaling.		●	●
Solve problems involving the multiplication of fractions.		●	●
Solve problems involving the division of whole numbers with quotients that are fractions.		●	●
Divide fractions by whole numbers and whole numbers by fractions.		●	●
Understand decimal notation for fractions, and compare decimal fractions.			
Add two fractions with denominators of 10 and 100.		●	●
Write decimal fractions using decimal notation.		●	●
Compare two decimals to the hundredths by reasoning about their size.		●	●
Use equivalent fractions as a strategy to add and subtract fractions.			
Add and subtract fractions with unlike denominators using a range of models.			●
Solve word problems involving the addition and subtraction of fractions referring to the same whole, including cases with unlike denominators, using a range of models.			●

Number and Operations – Fractions continued

	3	4	5
Apply and extend previous understandings of multiplication and division.			
Interpret a fraction as the division of the numerator by the denominator.			●
Solve word problems involving the division of whole numbers leading to answers in the form of fractions or mixed numbers, for example by using visual fraction models or equations to represent the problem.			●
Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.			●
Find the area of a rectangle with fractional side lengths by tiling it with unit squares.			●
Interpret multiplication as scaling.			●
Solve real-world problems involving the multiplication of fractions and mixed numbers.			●
Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.			●

Measurement and Data

	3	4	5
Solve problems involving measurement and estimation.			
Solve word problems involving the addition and subtraction of time intervals in minutes.	●		
Tell and write time to the nearest minute and measure time intervals in minutes.	●		
Record measurement equivalents in a two-column table.	●		
Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	●		
Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes given in the same units.	●	●	

Measurement and Data continued

	3	4	5
Solve problems involving measurement and conversion of measurements.			
Know the relative sizes of measurements within one system of measurement.	●	●	
Express measurements in a larger unit in terms of a smaller unit.	●	●	
Record measurement equivalents in a two-column table.	●	●	
Solve problems involving distances, intervals of time, liquid volumes, masses of objects, and money.	●	●	
Represent measurement quantities using diagrams, such as number line diagrams.	●	●	
Apply the area and perimeter formulas for rectangles in real-world and mathematical problems.	●	●	
Convert like measurement units within a given measurement system.			
Convert among different-sized standard measurement units within a given measurement system.		●	●
Use conversions to solve multi-step, real-world problems.		●	●
Represent and interpret data.			
Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories.	●		
Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.	●		
Make a line plot to display a data set of measurements in fractions of a unit.		●	
Solve problems involving the addition and subtraction of fractions by using information presented in line plots.		●	
Make a line plot to display a data set of measurements in fractions of a unit.			●
Use operations on fractions for this grade to solve problems involving information presented in line plots.			●

Measurement and Data continued

	3	4	5
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.			
Recognize area as an attribute of plane figures and understand concepts of area measurement.	●		
Measure area by counting unit squares (square centimeters, square meters, square inches, square feet, and improvised units).	●		
Relate area to the operations of multiplication and addition.	●		
Apply the area formula for rectangles to solve problems.	●		
Use area models to represent the distributive property.	●		
Geometric measurement: recognize perimeter.			
Find the perimeter of polygons given side lengths.	●		
Determine an unknown side length given the perimeter and other side lengths.	●		
Show rectangles with the same perimeter and different areas, and rectangles with the same area and different perimeters.	●		
Solve problems involving the perimeters of polygons.	●		
Apply the perimeter formula for rectangles to solve problems.	●		
Geometric measurement: understand concepts of angle and measure angles.			
Understand that angles are geometric shapes.		●	
Understand concepts of angle measurement.		●	
Measure angles in whole-number degrees using a protractor.		●	
Sketch angles of specified measure.		●	
Understand angle measure as additive.		●	
Solve addition problems to find unknown angles.		●	
Solve subtraction problems to find unknown angles.		●	

Measurement and Data continued

	3	4	5
Geometric measurement: understand concepts of volume.			
Understand volume as an attribute of three-dimensional figures.			●
Understand concepts of volume measurement.			●
Measure volume by counting unit cubes.			●
Find the volume of a right rectangular prism by multiplying the edge lengths.			●
Represent three-fold whole number products as volumes to show the associative property.			●
Use the volume formula to determine volume.			●
Understand that volume is additive.			●
Find the volumes of composite three-dimensional figures.			●
Solve problems involving volume.			●

Geometry

	3	4	5
Reason with shapes and their attributes. (continued)			
Understand that shapes in different categories may share attributes.	●		
Understand that shared attributes of shapes can define a larger category.	●		
Recognize rhombuses, rectangles, and squares as examples of quadrilaterals.	●		
Classify two-dimensional figures in a hierarchy based on properties.	●	●	●
Compare and organize two-dimensional figures based on attributes.			●
Partition circles and rectangles into two and four equal shares.			
Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.			
Partition circles and rectangles into two, three, or four equal shares.	●		

	3	4	5
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.			
Draw and identify points, lines, line segments, rays, and angles.		●	
Draw and identify parallel and perpendicular lines.		●	
Draw and identify right, acute, and obtuse angles.		●	
Use angle measure to classify figures.		●	
Identify figures with line symmetry.		●	
Draw lines of symmetry.		●	
Graph points on the coordinate plane to solve real-world and mathematical problems.			
Understand a coordinate system.			●
Graph points in the first quadrant of the coordinate plane.			●
Interpret the coordinate values of points in the first quadrant of the coordinate plane.			●

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- Unit 2: Number and Operations in Base Ten
- Unit 3: Number and Operations – Fractions
- Unit 4: Geometry, Measurement, and Data

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- Unit 2: Number and Operations in Base Ten
- Unit 3: Number and Operations – Fractions
- Unit 4: Geometry, Measurement, and Data



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