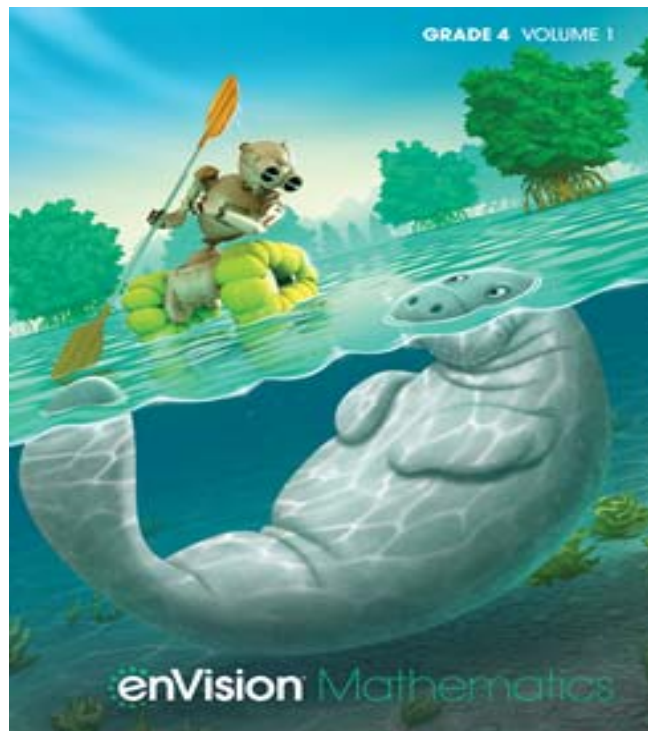


A Correlation of

enVision[®] Mathematics

©2020



To the
**Louisiana Student Standards
for Mathematics 2017
Grade 4**

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Introduction

The new enVision® Mathematics ©2020 is the latest offering of the nationally recognized Grades K-12 series, created for print, digital, and blended instruction. Problem-Based Learning connects with Visual Learning to deep conceptual understanding. Interactive multimedia experiences engage learners in student choice and solving rich problems. Extensive customization and differentiation options empower every teacher and student.

UNDERSTANDING

A simple lesson design provides a clear, intentional pathway. Starting on a firm foundation of conceptual understanding, students can connect and apply math ideas in amazing ways. High-interest math projects invite all students to be active participants.

A simple lesson design provides a clear, intentional pathway.

STEP 1 Problem-Based Learning

STEP 2 Visual Learning

STEP 3 Assess and Differentiate

ASSESSMENT

The enVision Assessment Suite offers options to move students toward mastery of state standards while driving instructional differentiation.

DIAGNOSTIC Assessment

Reading Test, Diagnostic Test (Math Diagnosis and Intervention System), Review What You Know

FORMATIVE Assessment

SCOUT Observational Assessment used during Solve & Share, Do You Understand? And Convince Me! Guide Practice, Quick Check

SUMMATIVE Assessment

Topic Assessments, Topic Performance Assessments, Examview Test Generator, Fluency Assessments, Cumulative/Benchmarks Assessments, Progress Monitoring Assessments

INSTRUCTIONAL SUPPORT

Gain a new perspective on your teaching with embedded strategies, methods, and a wide range of Professional Development opportunities in print and digital formats.

Ideas, Inspiration, and Teaching Methods

Math background for every Topic and Lesson serves as an easy-to-access math methods course.

Make every lesson perfect for you. Access all digital content, assessments, and management tools Realize.com.

Kids See the Math. Teachers See Results.

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Math Practices	
<p>1. Make sense of problems and persevere in solving them.</p>	<p>enVision Mathematics provides numerous instructional opportunities to help students develop proficiency in the math practices. To get students off to a good start on all eight practices, use the Math Practices and Problem Solving Handbook pages at Realize.com, along with the Math Practices Posters, and supporting Math Practices Animations. Each lesson begins with Problem-Based Learning, an activity in which students interact with their peers and teachers to make sense of and decide on a workable solution for a situation. Another feature of each lesson is the set of problem-solving exercises in which students persevere by applying different skills and strategies to solve problems. Each Problem-Solving Lesson provides instruction and practice focused on a specific math practice.</p> <p>Student’s Edition and Teacher’s Edition pages 13–16, 21–24, 49–52, 53–56, 65–68, 81–84, 105–108, 109–112, 153–156, 205–208, 233–236, 237–240, 245–248, 261–264, 293–296</p>
<p>2. Reason abstractly and quantitatively.</p>	<p>enVision Mathematics provides scaffolded instruction to help students develop both quantitative and abstract reasoning. In the Visual Learning Bridge, students can see how to represent a given situation numerically or algebraically. They will have opportunities later in the lesson to reason abstractly as they endeavor to represent situations symbolically. Reasonableness exercises remind students to compare their work to the original situation. Reasoning problems throughout the exercise sets focus students’ attention on the structure or meaning of an operation, for example, rather than merely the solution.</p> <p>Student’s Edition and Teacher’s Edition pages 5–8, 9–12, 13–16, 17–20, 21–24, 41–44, 57–60, 61–64, 65–68, 81–84, 85–88, 105–108, 129–132, 133–136, 137–140</p>

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<p>3. Construct viable arguments and critique the reasoning of others.</p>	<p>Consistent with a focus on reasoning and sense-making is a focus on critical reasoning—argumentation and critique of arguments. In enVision Mathematics, the Problem-Based Learning affords students opportunities to share with classmates their thinking about problems, their solution methods, and their reasoning about the solutions. Many exercises found throughout the program specifically call for students to justify or explain their solutions. The ability to articulate a clear explanation for a process is a stepping stone to critical analysis and reasoning of both the student’s own processes and those of others.</p> <p>Student’s Edition and Teacher’s Edition pages 9–12, 17–20, 21–24, 37–40, 41–44, 45–48, 49–52, 57–60, 61–64, 85–88, 101–104, 137–140, 149–152, 177–180, 181–184</p>
<p>4. Model with mathematics.</p>	<p>Students using enVision Mathematics are introduced to mathematical modeling in the early grades. They first use manipulatives and drawings and then equations to model addition and subtraction situations. The Visual Learning Bridge and Visual Learning Animation Plus often present real-world situations, and students are shown how these can be modeled mathematically. In later grades, students expand their modeling skills to include representations such as tables and graphs, as well as equations.</p> <p>Student’s Edition and Teacher’s Edition pages 5–8, 13–16, 65–68, 89–92, 93–96, 109–112, 133–136, 141–144, 145–148, 153–156, 169–172, 177–180, 181–184, 185–188, 193–196</p>

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<p>5. Use appropriate tools strategically.</p>	<p>Students become fluent in the use of a wide assortment of tools ranging from physical objects, including manipulatives, rulers, protractors, and even pencil and paper, to digital tools, such as Online Math Tools and computers. As students become more familiar with the tools available to them, they are able to begin making decisions about which tools are most helpful in a particular situation.</p> <p>Student’s Edition and Teacher’s Edition pages 17–20, 45–48, 53–56, 97–100, 133–136, 193–196, 245–248, 293–296, 297–300, 313–316, 317–320, 333–336, 337–340, 345–348, 353–356</p>
<p>6. Attend to precision.</p>	<p>Students are expected to use mathematical terms and symbols with precision. Key terms and concepts are highlighted in each lesson. The Problem-Based Learning activity provides repeated opportunities for students to use precise language to explain their solution paths while solving problems. In the Convince Me! feature, students revisit these key terms or concepts and provide explicit definitions or explanations.</p> <p>Student’s Edition and Teacher’s Edition pages 21–24, 37–40, 97–100, 105–108, 153–156, 197–200, 245–248, 269–272, 305–308, 345–348, 393–396, 417–420, 449–452, 465–468, 481–484</p>

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<p>7. Look for and make use of structure.</p>	<p>Students are encouraged to look for structure as they develop solution plans. As students mature in their mathematical thinking, they look for structure in numerical operations by focusing on place value and properties of operations. This focus on looking for and recognizing structure enables students to draw from patterns as they formalize their thinking about the structure of operations.</p> <p>Student's Edition and Teacher's Edition pages 5-8, 37-40, 45-48, 53-56, 57-60, 61-64, 81-84, 89-92, 93-96, 97-100, 101-104, 129-132, 141-144, 145-148, 149-152</p>
<p>8. Look for and express regularity in repeated reasoning.</p>	<p>Students are prompted to look for repetition in computations to help them develop shortcuts and become more efficient problem solvers. Students are reminded to think about problems they have encountered previously that may share features or processes. They are encouraged to draw on the solution plan developed for such problems, and, as their mathematical thinking matures, to look for and apply generalizations to similar situations. The Problem-Based Learning activities offer students opportunities to look for regularity in the way operations behave.</p> <p>Student's Edition and Teacher's Edition pages 9-12, 49-52, 269-272, 309-312, 361-364, 365-368, 389-392, 421-424, 461-464, 481-484, 485-488, 489-492, 497-500, 521-524, 557-560</p>

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Operations and Algebraic Thinking 4.OA	
A. Use the four operations with whole numbers to solve problems.	
4.OA.A.1 Interpret a multiplication equation as a comparison and represent verbal statements of multiplicative comparisons as multiplication equations, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7, and 7 times as many as 5.	SE: 223–224, 225–228, 229–232, Reteaching: 251 Set A TE: 223–224A, 225A–228B, 229A–232B, Reteaching: 251 Set A
4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison (Example: 6 times as many vs 6 more than).	SE: 85–88, 223–224, 225–228, 229–232, 233–236, 237–240, 241–244, 245–248, Reteaching: 251–252 Sets A, B, D; 260 TE: 85A–88B, 223–224A, 225A–228B, 229A–232B, 233A–236B, 237A–240B, 241A–244B, 245A–248B, Reteaching: 251–252 Sets A, B, D; 260–260C
4.OA.A.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. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Example: Twenty-five people are going to the movies. Four people fit in each car. How many cars are needed to get all 25 people to the theater at the same time?	SE: 41–44, 45–48, 49–52, 53–56, 57–60, 61–64, 65–68, Reteaching: 71–72 Sets B, F; 80, 85–88, 97–100, 105–108, 109–112, Reteaching: 115–118 Sets B, G, H; 137–140, 141–144, 149–152, 153–156, Reteaching: 159–160 Set C; 168, 173–176, 177–180, 181–184, 197–120, 205–208, Reteaching: 211–214 Sets B, H; 233–236, 237–240, 241–244, 245–248, Reteaching: 251 Set B; 260, 481–484, 485–488, 489–492, 493–496, 497–500, 501–504, 505–508, 529–532, 569–572 TE: 41A–44B, 45A–48B, 49A–52B, 53A–56B, 57A–60B, 61A–64B, 65A–68B, Reteaching: 71–72 Sets B, F; 80–80C, 85A–88B, 97A–100B, 105A–108B, 109A–112B, Reteaching: 115–118 Sets B, G, H; 137A–140B, 141A–144B, 149A–152B, 153A–156B, Reteaching: 159–160 Set C; 168–168C, 173A–176B, 177A–180B, 181A–184B, 197A–120B, 205A–208B, Reteaching: 211–214 Sets B, H; 233A–236B, 237A–240B, 241A–244B, 245A–248B, Reteaching: 251 Set B; 260–260C, 481A–484B, 485A–488B, 489A–492B, 493A–496B, 497A–500B, 501A–504B, 505A–508B, 529A–532B, 569A–572B

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B. Gain familiarity with factors and multiples.	
4.0A.B.4 Using whole numbers in the range 1-100,	
4.0A.B.4. a. Find all factor pairs for a given whole number.	SE: 261–264, 265–268, Reteaching: 283 Sets A–B TE: 261A–264B, 265A–268B, Reteaching: 283 Sets A–B
4.0A.B.4.b. Recognize that a given whole number is a multiple of each of its factors.	SE: 277-280, Reteaching: 284 Set E; 522-524, 525-528 TE: 257C, 257E, 277A-280B, Reteaching: 284 Set E; 522-524B, 525-528A
4.0A.B.4.c Determine whether a given whole number is a multiple of a given one-digit number.	SE: 277-280, Reteaching: 284 Set E; 525-528 TE: 257C, 257E, 277A-280B, Reteaching: 284 Set E; 525-528A
4.0A.B.4.d. Determine whether a given whole number is prime or composite.	SE: 273-276, Reteaching: 284 Set D TE: 257C-257E, 273A-276B, Reteaching: 284 Set D
C. Generate and analyze patterns.	
4.0A.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	SE: 519–520, 521–524, 525–528, 529–532, 533–536, Reteaching: 539–540 Sets A–D; 589–592 TE: 519–520A, 521A–524B, 525A–528B, 529A–532B, 533A–536B, Reteaching: 539–540 Sets A–D; 589A–592B

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Number and Operations in Base Ten 4.NBT	
A. Generalize place value understanding for multi-digit whole numbers.	
4.NBT.A.1 Recognize that in a multi-digit whole number less than or equal to 1,000,000, a digit in one place represents ten times what it represents in the place to its right. For example, (1) recognize that that $700 \div 70 = 10$; (2) in the number 7,246, the 2 represents 200, but in the number 7,426, the 2 represents 20, recognizing that 200 is ten times as large as 20, by applying concepts of place value and division.	SE: 9–12, 21, 24, Reteaching: 27 Set B TE: 9A–12B, 21A–21, 24–24B, Reteaching: 27 Set B
4.NBT.A.2 Read and write multi-digit whole numbers less than or equal to 1,000,000 using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	SE: 3, 4, 5–8, 13–16, 21–24, Reteaching: 27 Sets A–C; 35–36 TE: 3–3A, 4–4C, 5A–8B, 13A–16B, 21A–24B, Reteaching: 27 Sets A–C; 35–36A
4.NBT.A.3 Use place value understanding to round multi-digit whole numbers, less than or equal to 1,000,000 to any place.	SE: 4, 17–20, 21, 24, Reteaching: 28 Set D TE: , 4–4C, 17A–20B, 21A–21, 24–24B, Reteaching: 28 Set D
B. Use place value understanding and properties of operations to perform multi-digit arithmetic.	
4.NBT.B.4 Fluently add and subtract multi-digit whole numbers with sums less than or equal to 1,000,000 using the standard algorithm.	SE: 35–36, 37–40, 41–44, 45–48, 49–52, 53–56, 57–60, 61–64, 65–68, Reteaching: 71–72 Sets A–E TE: 35–36A, 37A–40B, 41A–44B, 45A–48B, 49A–52B, 53A–56B, 57A–60B, 61A–64B, 65A–68B, Reteaching: 71–72 Sets A–E

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<p>4.NBT.B.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.</p>	<p>SE: 79, 80, 81–84, 89–92, 93–96, 97–100, 101–104, 105–108, 109–112, Reteaching: 115–118 Sets A–G; 127–128, 129–132, 133–136, 137–140, 141–144, 145–148, 149–152, 153–156, Reteaching: 159–160 Sets A–F; 168, 173–176, 177–180, 223–224, 225–228, 229–232, 233–236, 237–240, 241–244, 245–248, Reteaching: 251–252 Sets A, B, D; 261–264, 265–268, 269–272, 273–276, 277–280, Reteaching: 283–284 Sets A–E; 301–304, 313–316, 525–528</p> <p>TE: 79–79A, 80–80C, 81A–84B, 89A–92B, 93A–96B, 97A–100B, 101A–104B, 105A–108B, 109A–112B, Reteaching: 115–118 Sets A–G; 127–128A, 129A–132B, 133A–136B, 137A–140B, 141A–144B, 145A–148B, 149A–152B, 153A–156B, Reteaching: 159–160 Sets A–F; 168–168C, 173A–176B, 177A–180B, 223–224A, 225A–228B, 229A–232B, 233A–236B, 237A–240B, 241A–244B, 245A–248B, Reteaching: 251–252 Sets A, B, D; 261A–264B, 265A–268B, 269A–272B, 273A–276B, 277A–280B, Reteaching: 283–284 Sets A–E; 301A–304B, 313A–316B, 525A–528B</p>
<p>4.NBT.B.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.</p>	<p>SE: 167, 169–172, 173–176, 177–180, 181–184, 185–188, 189–192, 193–196, 197–200, 201–204, 205–208, Reteaching: 211–214 Sets A, C, H; 229–232, 233–236, 237–240, 241–244, 245–248, Reteaching: 251–252 Sets A, B, D; 260, 305–308, 525–528, 529–532</p> <p>TE: 167–167A, 168–168C, 169A–172B, 173A–176B, 177A–180B, 181A–184B, 185A–188B, 189A–192B, 193A–196B, 197A–200B, 201A–204B, 205A–208B, Reteaching: 211–214 Sets A, C, H; 229A–232B, 233A–236B, 237A–240B, 241A–244B, 245A–248B, Reteaching: 251–252 Sets A, B, D; 260–260C, 305A–308B, 525A–528B, 529A–532B</p>

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Number and Operations—Fractions 4.NF	
A. Extend understanding of fraction equivalence and ordering.	
4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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. (Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	SE: 293–296, 297–300, 301–304, 305–308, 313–316, 318–320, Reteaching: 323 Sets A, B; 422 TE: 293A–296B, 297A–300B, 301A–304B, 305A–308B, 313A–316B, 318–320B, Reteaching: 323–324 Sets A, B; 422
4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. 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, e.g., by using a visual fraction model. (Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	SE: 309–312, 313–316, 317–320, Reteaching: 324 Sets C, D; 332, 416, 421–424 TE: 309A–312B, 313A–316B, 317A–320B, Reteaching: 324 Sets C, D; 332–332B, 416–416C, 421A–424B
B. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	
4.NF.B.3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$. (Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	SE: 333–336, 341–344, 345–348, 349–352, 353–356, Reteaching: 375–376 Sets A, C, D TE: 333A–336B, 337A, 341A–344B, 345A–348B, 349A–352B, 353A–356B, Reteaching: 375–376 Sets A, C, D
4.NF.B.3.a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. Example: $3/4 = 1/4 + 1/4 + 1/4$.	SE: 333–336, 337–340, 341–344, 345–348, 349–352, 353–356, 369–372, Reteaching: 375–376 Sets A, C, D TE: 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 369A–372B, Reteaching: 375–376 Sets A, C, D

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4.NF.B.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, e.g., by using a visual fraction model. <i>Examples: $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$; $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$; $2 \frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$.</i>	SE: 332, 337–340, Reteaching: 375 Sets A, B; 416, 553–556 TE: 332–332A, 337A–340B, Reteaching: 375 Sets A, B; 416–416C, 553A–556B
4.NF.B.3.c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	SE: 331, 332, 57–360, 361–364, 365–368, 369–372, Reteaching: 376 Set E; Reteaching: 407 Set C; 429–432, 569–572 TE: 331–331A, 332–332C, 357A–360B, 361A–364B, 365A–368B, 369A–372B, 376, Reteaching: 376 Set E; Reteaching: 407 Set C; 429A–432B, 569A–572B
4.NF.B.3.d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	SE: 331, 332, 33–336, 341–344, 345–348, 349–352, 353–356, 357–360, 361–364, 365–368, 369–372, Reteaching: 376 Set F; 397–400, 401–404, 417–420, 421–424, 425–428, 429–432, Reteaching: 435–436 Sets A–D; 481–484, 485–488, 489–492 TE: 331–331A, 332–332C, 333A–336B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 357A–360B, 361A–364B, 365A–368B, 369A–372B, Reteaching: 376 Set F; 397A–400B, 401A–404B, 417A–420B, 421A–424B, 425A–428B, 429A–432B, Reteaching: 435–436 Sets A–D; 481A–484B, 485A–488B, 489A–492B
4.NF.B.4 Multiply a fraction by a whole number. (Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.)	SE: 389–392, 393–396, Reteaching: 407 Sets A, B TE: 389A–392B, 393A–396B, Reteaching: 407 Sets A, B
4.NF.B.4.a. Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$. <i>For example, use a visual fraction model to represent $\frac{5}{4}$ as the product $5 \times (\frac{1}{4})$, recording the conclusion by the equation $\frac{5}{4} = 5 \times (\frac{1}{4})$.</i>	SE: 383–384, 385–388, 389–392, 393–396, Reteaching: 407 Sets A, B TE: 383–384A, 385A–388B, 389A–392B, 393A–396B, Reteaching: 407 Sets A, B

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4.NF.B.4.b. Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. <i>For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.)</i>	SE: 389–392, 393–396, Reteaching: 407 Sets B, C TE: 389A–392B, 393A–396B, Reteaching: 407 Sets B, C
4.NF.B.4.c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. <i>For example, if each person at a party will eat $3/8$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?</i>	SE: 383–384, 389–392, 393–396, 397–400, 401–404, Reteaching: 407–408 Sets C, E; 481–484, 485–488, 489–492, 501–504, 505–508 TE: 383–384A, 389A–392B, 393A–396B, 397A–400B, 401A–404B, Reteaching: 407–408 Sets C, E; 481A–484B, 485A–488B, 489A–492B, 501A–504B, 505A–508B
C. Understand decimal notation for fractions, and compare decimal fractions.	
4.NF.C.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. <i>For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.</i>	SE: 443–444, 457–460, Reteaching: 472 Set D TE: , 443–444A, 457A–460B, Reteaching: 472 Set D
4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite 0.62 as $62/100$; describe a length as 0.62 meters; locate 0.62 on a number line diagram, represent $62/100$ of a dollar as \$0.62.</i>	SE: 445–448, 449–452, 461–464, Reteaching: 471 Sets A, B TE: 445A–448B, 449A–452B, 461A–464B, Reteaching: 471 Sets A, B
4.NF.C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.	SE: , 443–444, 453–456, 65–468, Reteaching: 471 Set C; 493–496 TE: 443–444A, 453A–456B, 465A–468B, Reteaching: 471 Set C; 493A–496B

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Measurement and Data 4.MD	
A. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
<p>4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. (Conversions are limited to one-step conversions.) For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion pairs table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</p>	<p>SE: 397–400, 479, 480, 481–484, 485–488, 489–492, 493–496, 497–500, Reteaching: 511 Sets A, B</p> <p>TE: 397A–400B, 479–479A, 480–480C, 481A–484B, 485A–488B, 489A–492B, 493A–496B, 497A–500B, Reteaching: 511 Sets A, B</p>
<p>4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>	<p>SE: 383–384, 397–400, 401–404, Reteaching: 408 Set D; 449–452, 453–456, 461–464, 465–468, Reteaching: 472 Set E; 480, 481–484, 485–488, 489–492, 493–496, 497–500, 501–504, 505–508, Reteaching: 511 Set A</p> <p>TE: 383–384A, 397A–400B, 401A–404B, Reteaching: 408 Set D; 449A–452B, 453A–456B, 461A–464B, 465A–468B, Reteaching: 472 Set E; 480–480C, 481A–484B, 485A–488B, 489A–492B, 493A–496B, 497A–500B, 501A–504B, 505A–508B, Reteaching: 511 Set A</p>
<p>4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. <i>For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</i></p>	<p>SE: 153–156, 168, 479, 501–504, 505–508, Reteaching: 512 Sets C; D605–608</p> <p>TE: 153A–156B, 168–168C, 479–479A, 501A–504B, 505A–508B, Reteaching: 512 Sets C; D605A–608B</p>
B. Represent and interpret data.	

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4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i>	SE: 415, 416, 417–420, 421–424, 425–428, 429–432, Reteaching: 435–436 Sets A–D TE: 415, 416, 417–420, 421–424, 425–428, 429–432, Reteaching: 435–436 Sets A–D
C. Geometric measurement: understand concepts of angle and measure angles.	
4.MD.C.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	SE: 547, 549–552, 553–556, 557–560, 569–572, Reteaching: 575 Set B; 589–592 TE: 547–547A, 549A–552B, 553A–556B, 557A–560B, 569A–572B, Reteaching: 575 Set B; 589A–592B\
4.MD.C.5.a. 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.	SE: 547, 549–552, 553–556, 557–560, 569–572, Reteaching: 575 Set B; 589–592 TE: 547, 549A–552B, 553A–556B, 557A–560B, 569A–572B, Reteaching: 575 Set B; 589A–592B
4.MD.C.5.b. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles.	SE: 553–556, 577 TE: 545C, 553A–556B
4.MD.C.5.c. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.	SE: 547, 557–560, 561–564, 569–572, Reteaching: 576 Set D; 589–592 TE: 547, 557A–560B, 561A–564B, 569A–572B, Reteaching: 576 Set D; 589A–592B
4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	SE: 547, 548, 561–564, 569–572, Reteaching: 576 Sets D, F TE: 547–547A, 548–548C, 561A–564B, 569A–572B, Reteaching: 576 Sets D, F

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4.MD.C.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, e.g., by using an equation with a symbol for the unknown angle measure.	SE: 565–568, 569–572, Reteaching: 576 Set E TE: 565A–568B, 569A–572B, Reteaching: 576 Set E
D. Relate area to operations of multiplication and addition.	
4.MD.D.8. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.	This concept is taught in Grade 3, Lesson 6-6.
Geometry 4.G	
A. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	SE: 547, 548, 549–552, Reteaching: 575 Set A; 583–584, 585–588, 589–592, 593–596, 605–608, Reteaching: 611 Set A TE: 547–547A, 548–548C, 549A–552B, Reteaching: 575 Set A; 583–584A, 585A–588B, 589A–592B, 593A–596B, 605A–608B, Reteaching: 611 Set A
4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	SE: 583–584, 589–592, 593–596, 605–608, Reteaching: 611–612 Sets B, C, F TE: 583–584A, 589A–592B, 593A–596B, 605A–608B, Reteaching: 611–612 Sets B, C, F
4.G.A.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.	SE: 583–584, 597–600, 601–604, Reteaching: 612 Sets D, E TE: 583–584A, 597A–600B, 601A–604B, Reteaching: 612 Sets D, E