A Correlation of

enVision® Mathematics

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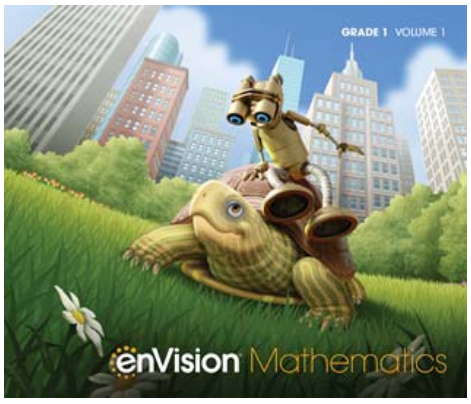

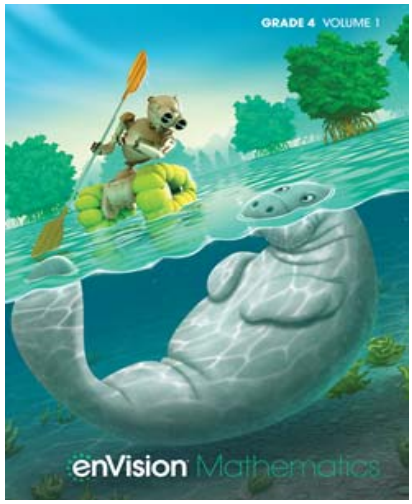

To the

2017 Kansas Mathematics Standards
Kindergarten

SAVVAS

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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 at SavvasRealize.com.

Kids See the Math. Teachers See Results.

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Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **Student's Edition and Teacher's Edition pages** 21–24, 29–32, 77–80, 145–148, 157–160, 173–176, 181–184, 205–208, 217–220, 225–228, 265–268, 273–276, 297–300, 305–308, 317–320

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2. Reason abstractly and quantitatively.	**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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 25–28, 33–36, 41–44, 61–64, 65–68, 93–96, 97–100, 101–104,113–116, 117–120, 145–148, 149–152, 177–180
3. Construct viable arguments and critique the reasoning of others.	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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 13–16, 17–20, 41–44, 65–68, 69–72, 73–76, 77–80, 93–96, 101–104, 105–108, 109–112, 117–120, 141–144

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4. Model with Mathematics.	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. **Student's Edition and Teacher's Edition pages** 9–12, 17–20, 21–24, 25–28, 29–32, 69–72, 77–80, 93–96, 109–112, 141–144, 153–156, 201–204, 209–212, 217–220, 221–224
5. Use appropriate tools strategically.	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. **Student's Edition and Teacher's Edition pages** 5–8, 13–16, 17–20, 33–36, 41–44, 97–100, 105–108, 109–112, 113–116, 121–124, 149–152, 157–160, 181–184, 205–208, 273–276

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6. Attend to precision.	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. **Student's Edition and Teacher's Edition pages** 13–16, 25–28, 29–32, 61–64, 65–68, 73–76, 97–100, 105–108, 149–152, 153–156, 173–176, 177–180, 185–188, 201–204, 213–216
7. Look for and make use of structure.	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. **Student's Edition and Teacher's Edition pages** 37–40, 61–64, 117–120, 121–124, 181–184, 225–228, 269–272, 293–296, 317–320, 321–324, 329–332, 357–360, 361–364, 365–368, 369–372

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8. Look for and express regularity in repeated reasoning.	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. **Student's Edition and Teacher's Edition pages** 21–24, 37–40, 73–76, 113–116, 121–124, 141–144, 157–160, 177–180, 209–212, 269–272, 293–296, 317–320, 325–328, 329–332, 353–356
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Know number names and count sequence.	
K.CC.1 Count to 100 by ones and by tens and identify as a growth pattern.	**SE:** 92, 117–120, Reteaching: 130 Set G; 149–152, 157–160, 248, 347, 348, 365–368, 373–376, Reteaching: 380 Set D; 431, 432, 433–436, 437–440, 441–444, 445–448, 449–452, Reteaching: 455-456, Sets A-D; 465–468, 469–472, 473–476, 477–480 **TE:** 92–92C, 117A–120B, Reteaching: 129–130 Set G; 149A–152B, 157A–160B, 248–248C, 347–347A, 348–348C, 365A–368B, 373A–376B, Reteaching: 380 Set D; 431–431A, 432–432C, 433A–436B, 437A–440B, 441A–444B, 445A–448B, 449A–452B, Reteaching: 455- 456 Sets A-D; 465A–468B, 469A–472B, 473A–476B, 477A–480B

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K.CC.2 Count forward beginning from given number within the known sequence (instead of having to begin at 1).	**SE:** 92, 117–120, Reteaching: 130 Set G; 149–152, 157–160, 248, 347, 348, 365–368, 373–376, Reteaching: 380 Set D; 431, 432, 433–436, 437–440, 441–444, 445–448, 449–452, Reteaching: 456 Set D **TE:** 92- 92C, 117A–120B, Reteaching: 129–130 Set G; 149A–152B, 157A–160B, 248–248C, 347–347A, 348–348C, 365A–368B, 373A–376B, Reteaching: 380 Set D; 431–431A, 432–432C, 433A–436B, 437A–440B, 441A–444B, 445A–448B, 449A–452B, Reteaching: 456 Set D
K.CC.3 Read and write numerals from 0 to 20.	**SE:** 3, 4, 13–16, 25–28, 33–36, Reteaching: 47-49 ,Sets B, E; 59–60, 73–76, 77–80, 91, 92, 97–100, 105–108, 113–116, 121–124, Reteaching: 127-129,Sets A, C, E; 199–200, 201–204, 205–208, 209–212, 213–216, 247, 248, 249–252, 253–256, 257–260, 261–264, 291–292, 317–320, 325–328, 329–332, 347, 348, 349–352, 353–356, 357–360, 361–364, Reteaching: 379 Set A **TE:** 3–3A, 4–4C, 13A–16B, 25A–28B, 33A–36B, Reteaching: 47–50,Sets B, E; 59–60A, 73A–76B, 77A–80B, 91–91A, 92–92C, 97A–100B, 105A–108B, 113A–116B, 121A–124B, Reteaching: 127–130 ,Sets A, C, E; 199–200A, 201A–204B, 205A–208B, 209A–212B, 213A–216B, 247–247A, 248–248C, 249A–252B, 253A–256B, 257A–260B, 261A–264B, 291–292A, 317A–320B, 325A–328B, 329A–332B, 347–347A, 348–348C, 349A–352B, 353A–356B, 357A–360B, 361A–364B, Reteaching: 379 Set A
Count to tell the number of objects.	
K.CC.4 Understand the relationship between numbers and quantities up to 20; connect counting to cardinality.	
K.CC.4a. When counting objects, say each number's name in sequential order pairing each object with one and only one number name and each number name with one and only one object.	**SE:** 3, 4, 5–8, 17–20, 29–32, 37–40, 41–44, Reteaching: 47-50, Sets A, C, F; 91, 92, 93–96, 101–104, 109–112, Reteaching: 127-128, Sets B, D **TE:** 3–3A, 4–4C, 5A–8B, 17A–20B, 29A–32B, 37A–40B, 41A–44B, Reteaching: 47–50, Sets A, C, F; 91–91A, 92–92C, 93A–96B, 101A–104B, 109A–112B, Reteaching: 127–128 Set B, D

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K.CC.4b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or order in which they are counted.	**SE:** 3, 4, 9–12, 21–24, 41–44, Reteaching: 50 Set F; 91, 109–112, 121–124, Reteaching: 127–128, Sets B, D **TE:** 3–3A, 4–4C, 9A–12B, 21A–24B, 41A–44B, Reteaching: 49–50 Set F; 91–91A, 109A–112B, 121A–124B, Reteaching: 127–128, Sets B, D
K.CC.4c. Understand that each successive number name refers to a quantity that is one larger.	**SE:** 3, 4, 37–40, 91, 117–120, 139–140, 157–160, 347, 365–368 **TE:** 3–3A, 4–4C, 37A–40B, 91–91A, 117A–120B, 139–140A, 157A–160B, 347–347A, 365A–368B
K.CC.4d. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	**SE:** MDIS 2.0 A4 **TE:** MDIS 2.0 A4
K.CC.5 Count to answer "how many?" up to 20 concrete or pictorial objects arranged in a line, a rectangular array, or a circle, or as many as 10 objects in a scattered configuration (subitizing); given a number from 1 to 20, count out that many objects.	**SE:** 3, 4, 5–8, 9–12, 13–16, 17–20, 21–24, 25–28, 29–32, 33–36, 41–44, Reteaching: 47- 50, Sets A, C, F; 59–60, 61–64, 65–68, 69–72, 73–76, 91, 92, 93–96, 97–100, 101–104, 105–108, 113–116, 139–140, 141–144, 171, 173–176, 177–180, 199–200, 201–204, 247, 249–252, 347, 348, 349–352, 353–356, 357–360, 361–364, 369–372, 373–376, Reteaching: 379-380, Sets A, C, D; 387–388, 389–392, 393–396, 397–400, 401–404, 405–408, 409–412, 413–416, 513–516, 525–528, 529–532, 533–536 **TE:** 3–3A, 4–4C, 5A–8B, 9A–12B, 13A–16B, 17A–20B, 21A–24B, 25A–28B, 29A–32B, 33A–36B, 41A–44B, Reteaching: 47–50, Sets A, C, F; 59–60A, 61A–64B,65A–68B, 69A–72B, 73A–76B, 91–91A, 92–92C, 93A–96B, 97A–100B, 101A–104B, 105A–108B, 113A–116B, 139–140A, 141A–144B, 171–171A,173A–176B, 177A–180B, 199–200A, 201A–204B, 247–247A, 249A–252B, 347–347A, 348–348C, 349A–352B, 353A–356B, 357A–360B,361A–364B, 369A–372B, 373A–376B, Reteaching: 379-380, Sets A, C, D; 387–388A, 389A–392B, 393A–396B, 397A–400B, 401A–404B, 405A–408B, 409A–412B, 413A–416B, 513A–516B, 525A–528B, 529A–532B, 533A–536B

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Compare numbers.	
K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, (e.g. by using matching and counting strategies.) Include groups with up to ten objects.	**SE:** 61–64, 65–68, 69–72, 73–76, 77–80, Reteaching: 83-84, Sets A-D; 92, 117–120, 139–140, 141–144, 145–148, 149–152, 153–156, Reteaching: 163-164,Sets A-D; 171, 181–184, 185–188, 509–512 **TE:** 61A–64B, 65A–68B, 69A–72B, 73A–76B, 77A–80B, Reteaching: 83–84, Sets A–D; 92–92C, 117A–120B, 139–140A, 141A–144B, 145A–148B, 149A–152B, 153A–156B, Reteaching: 163-164,Sets A-D; 171–171A, 181A–184B, 185A–188B, 509A–512B
K.CC.7 Compare two numbers between 1 and 10 presented as written numerals.	**SE:** 139–140, 145–148, 149–152, 153–156, Reteaching: 163-164, Sets B-C, 171, 181–184, 185–188 **TE:** 139–140A, 145A–148B, 149A–152B, 153A–156B, 171–171A, 171–171A, 181A–184B, 185A–188B
K.OA Operations and Algebraic Thinking	
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	
K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations.	**SE:** 199–200, 201–204, 205–208, 209–212, 213–216, 217–220, 221–224, 225–228, 229–232, Reteaching: 235-236, Sets A-D; 247, 248, 249–252, 253–256, 257–260, 261–264, 265–268, 269–272, 273–276, Reteaching: 279-280, Sets A-D; 291–292, 293–296, 297–300, 301–304, 305–308, 309–312, 313–316, 317–320, 321–324, Reteaching: 335-338,Sets A, C, E-G **TE:** 199–200A, 201A–204B, 205A–208B, 209A–212B, 213A–216B, 217A–220B, 221A–224B, 225A–228B, 229A–232B, Reteaching: 235–236, Sets A–D; 247, 248, 249–252, 253–256, 257–260, 261–264, 265–268, 269–272, 273–276, Reteaching: 279-280, Sets A-D; 291–292A, 293A–296B, 297A–300B, 301A–304B, 305A–308B, 309A–312B, 313A–316B, 317A–320B, 321A–324B, Reteaching: 335–338,Sets A, C, E-G

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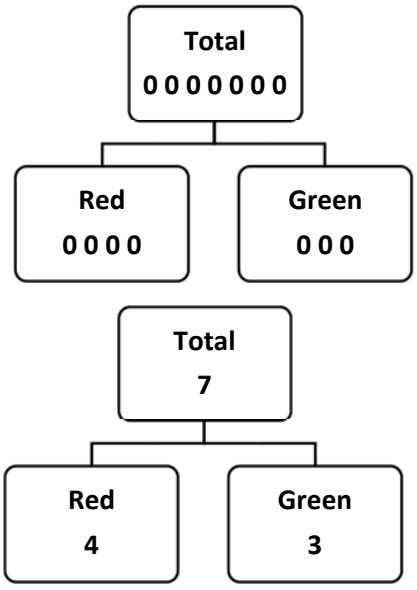
K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, (e.g. by using objects or drawings to represent the problem.) Refer to the examples below for specific situation types.	**SE:** 199–200, 201–204, 205–208, 209–212, 213–216, 217–220, 221–224, 229–232, Reteaching: 237-238, Sets E-G; 247, 248, 249–252, 253–256, 257–260, 261–264, 265–268, 273–276, Reteaching: 280-282, Sets C, E, G, H; 291–292, 293–296, 309–312, 313–316, 321–324, 348 **TE:** 199–200A, 201A–204B, 205A–208B, 209A–212B, 213A–216B, 217A–220B, 221A–224B, 229A–232B, Reteaching: 237–238, Sets E, F, G; 247–247A, 248–248C, 249A–252B, 253A–256B, 257A–260B, 261A–264B, 265A–268B, 273A–276B, Reteaching: 279–282 Set C, E, F, H; 291–292A, 293A–296B, 309A–312B, 313A–316B, 321A–324B, 348–348C
K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, (e.g. by using objects or drawings, and record each decomposition by a drawing or equation (e.g. $5 = 2 + 3$ and $5 = 4 + 11$)).  	**SE:** 293-296, 309-312, 313-316, 321-324, 325-328, 329-332 **TE:** 293A-296B, 309A-312B, 313A-316B, 321A–324B, 325A-328B 329A-332B

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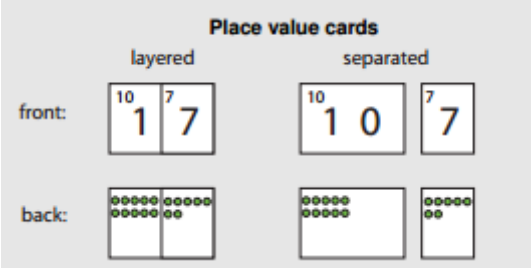
K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, (e.g. by using objects or drawings, and record the answer with a drawing or equation.).	**SE:** 291–292, 325–328, 329–332, Reteaching: 338 Set H; 517–520, 521–524 **TE:** 291–292A, 325A–328B, 329A–332B, Reteaching: 337–338 Set H; 517A–520B, 521A–524B
K.OA.5 Fluently (efficiently, accurately, and flexibly) add and subtract within 5.	**SE:** 199–200, 225–228, Reteaching: 238 Set H; 247, 269–272, Reteaching: 282 Set G; 291–292, 297–300, 301–304, 305–308, Reteaching: 335-336, Sets B, D **TE:** 199–200A, 225A–228B, Reteaching: 237–238 Set H; 247–247A, 269A–272B, Reteaching: 281–282 Set G; 291–292A, 297A–300B, 301A–304B, 305A–308B, Reteaching: 335–336, Sets B, D
K.NBT Number and Operations in Base Ten	
Work with numbers 11-19 to gain foundations for place value.	
K.NBT.1 Compose and decompose the numbers from 11-19 into ten ones and some further ones, (e.g. by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g. 10 + 8 = 18 and 19 = 10 + 9);  understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	**SE:** 387–388, 389–392, 393–396, 397–400, 401–404, 405–408, 409–412, 413–416, Reteaching: 419-422, Sets A-G **TE:** 387–388A, 389A–392B, 393A–396B, 397A–400B, 401A–404B, 405A–408B, 409A–412B, 413A–416B, Reteaching: 419–422, Sets A–G

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K. MD Measurement and Data	
Describe and compare measurable attributes.	
K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	**SE:** 547–548, 549–552, 553–556, 557–560, 561–564, 565–568 **TE:** 547–548A, 549A–552B, 553A–556B, 557A–560B, 561A–564B, 565A–568B
K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.	**SE:** 547–548, 549–552, 553–556, 557–560, 565–568, 569–572, Reteaching: 575-576, Sets A-D **TE:** 547–548A, 549A–552B, 553A–556B, 557A–560B, 565A–568B, 569A–572B, Reteaching: 575-576, Sets A, B, D
Classify objects and count the number of objects in each category.	
K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**SE:** 171, 172, 173–176, 177–180, 181–184, 185–188, Reteaching: 191-192, Sets A-D; 465–468 **TE:** 171–171A, 172–172C, 173A–176B, 177A–180B, 181A–184B, 185A–188B, Reteaching: 191–92, Sets A–D; 465A–468B
K.G Geometry	
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	
K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	**SE:** 463–464, 469–472, 473–476, 477–480, 481–484, 485–488, 489–492, Reteaching: 497-498, Sets F, G; 507, 508, 525–528 **TE:** 463–464A, 469A–472B, 473A–476B, 477A–480B, 481A–484B, 485A–488B, 489A–492B, Reteaching: 497–498, Sets F, G; 507–507A, 508–508C, 525A–528B
K.G.2 Correctly gives most precise name of shapes regardless of their orientations (position and direction in space) or overall size.	**SE:** 463–464, 469–472, 473–476, 477–480, 481–484, 485–488, 489–492, Reteaching: 495-497, Sets B-E; 508 **TE:** 463–464, 469A–472B, 473A–476B, 477A–480B, 481A–484B, 485A–488B, 489A–492B, 495–498, Reteaching: Sets B–E; 508–508C

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K.G.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"	**SE:** 465–468, 485–488, Reteaching: 495 Set A; 507, 521–524 **TE:** 465A–468B, 485A–488B, Reteaching: 495–496 Set A; 507–507A, 521A–524B
Analyze, Compare, sort and compose shapes.	
K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations (position and direction in space), using informal language to describe their similarities, differences, parts (e.g. number of sides and vertices/"corners") and other attributes (e.g. having sides of equal length).	**SE:** 463–464, 465-468, 473–476, 477–480, 481–484, 507, 509–512, 513–516, 517–520, 521–524, 529–532, Reteaching: 539-540, Sets A-D **TE:** 463–464A, 465A-468B, 473A–476B, 477A–480B, 481A–484B, 507–507A, 509A–512B, 513A–516B, 517A–520B, 521A–524B, 529A–532B, Reteaching: 539-540, Sets A-D
K.G.5 Model shapes in the world by building shapes from components (e.g. sticks and clay balls) and drawing shapes.	**SE:** 507, 513–516, 525–528, 529–532, 533–536, Reteaching: 540 Set D **TE:** 507–507A, 513A–516B, 525A–528B, 529A–532B, 533A–536B, Reteaching: 540 Set D
K.G.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	**SE:** 463–464, 507, 508, 525–528, 533–536 **TE:** 463–464A, 507–507A, 508–508C, 525A–528B, 533A–536B

2017 Kansas Mathematics Standards Grade 1	enVision Mathematics, ©2020 Grade 1
Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **Student's Edition and Teacher's Edition pages** 9–12, 29–32, 33–36, 37–40, 61–64, 85–88, 117–120, 133–136, 137–140, 169–172, 185–188, 189–192, 193–196, 233–236, 253–256

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2. Reason abstractly and quantitatively.	**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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 13–16, 17–20, 21–24, 25–28, 29–32, 65–68, 77–80, 89–92, 109–112, 121–124, 137–140, 141–144, 161–164
3. Construct viable arguments and critique the reasoning of others.	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. **Student's Edition and Teacher's Edition pages** 13–16, 21–24, 37–40, 61–64, 65–68, 69–72, 73–76, 89–92, 113–116, 117–120, 125–128, 129–132, 133–136, 141–144, 185–188

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4. Model with Mathematics.	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. **Student's Edition and Teacher's Edition pages** 5–8, 17–20, 21–24, 25–28, 33–36, 57–60, 69–72, 73–76, 81–84, 85–88, 89–92, 113–116, 117–120, 125–128, 137–140
5. Use appropriate tools strategically.	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**.** **Student's Edition and Teacher's Edition pages** 5–8, 17–20, 29–32, 81–84, 113–116, 129–132, 161–164, 165–168, 177–180, 185–188, 213–216, 293–296, 325–328, 365–368, 369–372

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6. Attend to precision.	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. **Student's Edition and Teacher's Edition pages** 37–40, 85–88, 189–192, 217–220, 221–224, 237–240, 253–256, 257–260, 261–264, 269–272, 289–292, 305–308, 329–332, 373–376, 377–380
7. Look for and make use of structure.	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. **Student's Edition and Teacher's Edition pages** 9–12, 69–72, 73–76, 77–80, 81–84, 89–92, 129–132, 173–176, 221–224, 225–228, 265–268, 285–288, 293–296, 297–300, 301–304

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8. Look for and express regularity in repeated reasoning.	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. **Student's Edition and Teacher's Edition pages** 13–16, 25–28, 57–60, 61–64, 133–136, 165–168, 169–172, 173–176, 177–180, 181–184, 229–232, 261–264, 285–288, 297–300, 309–312
1.OA Operations and Algebraic Thinking	
1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, (e.g. by using objects, drawings, and situation equations and/or solution equations with a symbol for the unknown number to represent the problem.)	**SE:** 3, 4, 5–8, 9–12, 13–16, 17–20, 21–24, 25–28, 29–32, 33–36, 37–40, Reteaching: 43–46 Sets A–H; 55–56, 57–60, 61–64, 81–84, 85–88, Reteaching: 98 Set H; 107, 108, 113–116, 117–120, 121–124, 137–140, 141–144, Reteaching: 149–150 Sets F, G; 161–164, 189–192, 193–196, Reteaching: 202 Sets F, G; 211, 212, 225-228, 229-232, 233–236, 252, 261–264, 265–268, 269–272 **TE:** 3–3A, 4–4C, 5A–8B, 9A–12B, 13A–16B, 17A–20B, 21A–24B, 25A–28B, 29A–32B, 33A–36B, 37A–40B, Reteaching: 43–46 Sets A–H; 55–56A, 57A–60B, 61A–64B, 81A–84B, 85A–88B, Reteaching: 97–98 Set H; 107–107A, 108–108C, 113A–116B, 117A–120B, 121A–124B, 137A–140B, 141A–144B, Reteaching: 149–150 Sets F, G; 161A–164B, 189A–192B, 193A–196B, Reteaching: 201–202 Sets F, G; 211–211A, 212-212C, 225A-228B, 229A-232B, 233A–236B, 261A–264B, 265A–268B, 269A–272B

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1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, *(e.g. by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.)*	**SE:** 4, 211, 212, 225–228, 229–232, 252, 261–264, 569–572 **TE:** 4–4C, 211–211A, 212–212C, 225A–228B, 229A–232B, 251–252A, 261A–264B, 569A–572B
1.OA.3 Apply (not necessary to name) properties of operations as strategies to add and subtract. Examples: $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.) To add 0 to any number, the answer is that number $7 + 0 = 7$ (Additive identity property of 0). Students need not use formal terms for these properties.	**SE:** 73–76, 89–92, Reteaching: 97 Set E; 108, 109–112, 141–144, 169–172, 211, 212, 225–228, 229–232, Reteaching: 244 Set C **TE:** 73A–76B, 89A–92B, Reteaching: 97–98 Set E; 108–108C, 109A–112B, 141A–144B, 169A–172B, 211–211A, 212–212C, 225A–228B, 229A–232B, Reteaching: 244 Set C
1.OA. 4 Understand subtraction as an unknown-addend problem. *For example, subtract* $10 - 8$ *by finding the number that makes 10 when added to 8.*	**SE:** 4, 29–32, 33–36, 81–84, Reteaching: 98 Set G; 108, 159–160, 173–176, 177–180, 181–184, 185–188, Reteaching: 200–201 Sets C–E **TE:** 4–4C, 29A–32B, 33A–36B, 81A–84B, Reteaching: 97–98 Set G; 108–108C, 159–160A, 173A–176B, 177A–180B, 181A–184B, 185A–188B, Reteaching: 199–202 Sets C–E

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Add and subtract within 20.	
1.0A.5 Relate counting to addition and subtraction (e.g. by counting on 2 to add 2, counting back 1 to subtract 1).	**SE:** 57–60, 61–64, 65–68, 77–80, Reteaching: 95–97 Sets A, C, F; 107, 108, 109–112, 113–116, 117–120, 121–124, Reteaching: 147 Sets A, B; 159–160, 161–164, 185–188, Reteaching: 199, 201 Sets A, E; 211, 213–216, 217–220, 221–224, 251–252, 253–256, 257–260, 533–536, 537–540 **TE:** 57A–60B, 61A–64B, 65A–68B, 77A–80B, Reteaching: 95–98 Sets A, C, F; 107–107A, 108–108C, 109A–112B, 113A–116B, 117A–120B, 121A–124B, Reteaching: 147-148 Sets A, B; 159–160A, 161A–164B, 185A–188B, Reteaching: 199- 202 Sets A, E; 211–211A, 213A–216B, 217A–220B, 221A–224B, 251–252A, 253A–256B, 257A–260B, 533A–536B, 537A–540B
1.0A.6 Add and subtract within 20, demonstrating fluency (efficiently, accurately, and flexibly) for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g. $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g. $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g. knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g. adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).	**SE:** 55-56, 57–60, 61–64, 65–68, 69-72, 77–80, 81-84, 85-88, 89-92, Reteaching: 95–96 Sets B, D; 107, 108, 117–120, 121–124, 125-128, 129-132, 133-136, 137-140, 141-144, Reteaching: 148-149 Sets C-E; 159–160, 165-168, 169-172, 173-176, 177-180, 181-184, 185–188, Reteaching: 200-201 Sets B, E; 211, 213–216, 251–252 **TE:** 55–56A, 57A–60B, 61A–64B, 65A–68B, 69A–72B, 77A–80B, 81A–84B, 85A–88B, 89A–92B, Reteaching: 95–96 Sets B, D; 107–107A, 108–108C, 117A–120B, 121A–124B, 125A–128B, 129A–132B, 133A–136B,137A–140B, 141A–144B, Reteaching: 147–150 Sets C-E; 159–160A, 165A–168B, 169A–172B, 173A–176B, 177A–180B, 181A–184B, 185A–188B, Reteaching: 199–202 Sets B, E; 211–211A, 213A–216B, 251–252A

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Work with addition and subtraction equations.	
1.OA.7 Understand the meaning of the equal sign (the value is the same on both sides of the equal sign) and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6; 7 = 8 – 1; 5 + 2 = 2 + 5; 4 + 1 = 3 + 2; 7 – 1 = 4; 5 +4 = 7 – 2	**SE:** 4, 5–8, 9–12, 13–16, 17–20, 211, 212, 217–220, 221–224, 237–240, Reteaching: 243–244 Sets A, D **TE:** 4–4C, 5A–8B, 9A–12B, 13A–16B, 17A–20B, 211–211A, 212–212C, 217A–220B, 221A–224B, 237A–240B, Reteaching: 243–244 Sets A, D
1.OA.8 Using related equations, Determine the unknown whole number in an addition or subtraction equation. For example, determine the unknown number that makes the equation true in each of the equations ___ - 3 = 7; 7 + 3 = ___.	**SE:** 211, 212, 213–216, 221–224, 237–240, Reteaching: 243 Set B **TE:** 211–211A, 212–212C, 213A–216B, 221A–224B, 237A–240B, Reteaching: 243 Set B
1.NBT Number and Operations in Base Ten	
Extend the counting sequence.	
1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	**SE:** 283, 284, 289–292, 293–296, 297–300, 301–304, 305–308, 309–312, Reteaching: 315–316 Sets B–D; 329–332, 333–336, 337–340, 373–376, 521–524, 525–528, 537–540, 565–568, 577–580, 585–588 **TE:** 283–283A, 284–284C, 289A–292B, 293A–296B, 297A–300B, 301A–304B, 305A–308B, 309A–312B, Reteaching: 315–316 Sets B–D; 329A–332B, 333A–336B, 337A–340B, 373A–376B, 521A–524B, 525A–528B, 537A–540B, 565A–568B, 577A–580B, 585A–588B
Understand place value.	
1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases	**SE:** 323–324, 333–336, 337–340, 341–344, 345–348, 349–352, Reteaching: 355–356 Sets A–C; 364, 409–412, 413–416, 417–420, 457–460, 465–468, 469–472, 521–524, 525–528, 529–532, 533–536, 537–540 **TE:** 323–324A, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, Reteaching: 355–356 Sets A–C; 364–364C, 409A–412B, 413A–416B, 417A–420B, 457A–460B, 465A–468B, 469A–472B, 521A–524B, 525A–528B, 529A–532B, 533A–536B, 537A–540B

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1.NBT.2a 10 can be thought of as a grouping of ten ones – called a "ten."	**SE:** 284, 285–288, 305–308, 309–312, 323–324, 325–328, 329–332, Reteaching: 355 Set A; 405–408, 421–424, 425–428, 433–436, 573–576 **TE:** 284–284C, 285A–288B, 305A–308B, 309A–312B, 323–324A, 325A–328B, 329A–332B, Reteaching: 355 Set A; 405A–408B, 421A–424B, 425A–428B, 433A–436B, 573A–576B
1.NBT.2b The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	**SE:** 325–328, Reteaching: 355 Set A **TE:** 325A–328B, Reteaching: 355 Set A
1.NBT.2c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	**SE:** 283, 284, 285–288, 297–300, 305–308, Reteaching: 315 Set A; 329–332, 401–404, 451, 453–456, 461–464, 573–576 **TE:** 283–283A, 284–284C, 285A–288B, 297A–300B, 305A–308B, Reteaching: 315 Set A; 329A–332B, 401A–404B, 451–451A, 453A–456B, 461A–464B, 573A–576B
1.NBT.2d Show flexibility in composing and decomposing tens and ones (e.g. 20 can be composed from 2 tens or 1 ten and 10 ones, or 20 ones).	**SE:** 323–324, 333–336, 337–340, 341–344, 345–348, 349–352, Reteaching: 355–356 Sets A–C; 364, 409–412, 413–416, 417–420, 457–460, 465–468, 469–472, 521–524, 525–528, 529–532, 533–536, 537–540 **TE:** 323–324A, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, Reteaching: 355–356 Sets A–C; 364–364C, 409A–412B, 413A–416B, 417A–420B, 457A–460B, 465A–468B, 469A–472B, 521A–524B, 525A–528B, 529A–532B, 533A–536B, 537A–540B
1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the relational symbols >, <, =, ≠.	**SE:** 363, 364, 365–368, 369–372, 373–376, 377–380, 381–384, 385–388, Reteaching: 392 Sets C, D **TE:** 363–363A, 364–364C, 365A–368B, 369A–372B, 373A–376B, 377A–380B, 381A–384B, 385A–388B, Reteaching: 392 Sets C, D

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Use place value understanding and properties of operations to add and subtract.	
1.NBT.4 Add within 100 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used including:	**SE:** 399–400, 401–404, 409–412, 413–416, 417–420, 421–424, 425–428, 429–432, 433–436, Reteaching: 439–442 Sets A, C–H; 452 **TE:** 399–400A, 401A–404B, 409A–412B, 413A–416B, 417A–420B, 421A–424B, 425A–428B, 429A–432B, 433A–436B, Reteaching: 439–442 Sets A, C–H; 452–452C
1.NBT.4a Adding a two-digit number and a one-digit number	**SE:** 409–412, 413–416, 417–420, 421–424, 429–432, 433–436, Reteaching: 440–441 Sets C-F; 452 **TE:** 409A–412B, 413A–416B, 417A–420B, 421A–424B, 429A–432B, 433A–436B, Reteaching: 439–442 Sets C-F; 452-452C
1.NBT.4b Adding a two-digit number and a multiple of 10	**SE:** 399-404, 405-408, 413-416, 416-420, 425-428, Reteaching: 439–442 Sets A-B, D-E; 452 **TE:** 399A-404B, 405A-408B, 413A-416B, 416A-420B, 425A-428B, Reteaching: 439–442 Sets A-B, D-E; 452-452C
1.NBT.4c Understanding that when adding two-digit numbers, combine like base-ten units such as tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	**SE:** 399–400, 401–404, 409–412, 413–416, 417–420, 421–424, 425–428, 429–432, 433–436, Reteaching: 439–442 Sets A, C–H; 452 **TE:** 399–400A, 401A–404B, 409A–412B, 413A–416B, 417A–420B, 421A–424B, 425A–428B, 429A–432B, 433A–436B, Reteaching: 439–442 Sets A, C–H; 452–452C
1.NBT.5 Given a two-digit number, mentally find 10 more of 10 less than the number, without having to count; explain the reasoning used.	**SE:** 363, 365–368, 369–372, Reteaching: 391 Sets A, B; 399–400, 405–408, 429–432, Reteaching: 439 Set B; 452, 453–456, 457–460, 461–464, 469–472, 473–476, 477–480, Reteaching: 484 Set C **TE:** 363–363A, 365A–368B, 369A–372B, Reteaching: 391 Sets A, B; 399–400A, 405A–408B, 429A–432B, Reteaching: 439–440 Set B; 452–452C, 453A–456B, 457A–460B, 461A–464B, 469A–472B, 473A–476B, 477A–480B, Reteaching: 484 Set C

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1.NBT.6 Subtract multiples of 10 in the range 10 to 90 from multiples of 10 in the range 10 to 90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**SE:** 451, 452, 453–456, 457–460, 461–464, 465–468, 473–476, 477–480, Reteaching: 483–484 Sets A, B, D **TE:** 451–451A, 452–452C, 453A–456B, 457A–460B, 461A–464B, 465A–468B, 473A–476B, 477A–480B, Reteaching: 483–484 Sets A, B, D
1.MD Measurement and Data	
Measure lengths indirectly and by iterating length units.	
1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	**SE:** 491–492, 493–496, 497–500, 505–508, Reteaching: 511 Sets A, B **TE:** 491–492A, 493A–496B, 497A–500B, 505A–508B, Reteaching: 511 Sets A, B
1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	**SE:** 491–492, 501–504, 505–508, Reteaching: 512 Sets C, D; 557–560, 561–564, 581–584 **TE:** 491–492A, 501A–504B, 505A–508B, Reteaching: 512 Sets C, D; 557A–560B, 561A–564B, 581A–584B
Tell and write time.	
1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.	**SE:** 520, 529–532, 533–536, 537–540, 541–544, Reteaching: 547–548 Sets B–D **TE:** 520–520C, 529A–532B, 533A–536B, 537A–540B, 541A–544B, Reteaching: 547–548 Sets B–D
Represent and interpret data.	
1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	**SE:** 251–252, 253–256, 257–260, 261–264, 265–268, 269–272, Reteaching: 275–276 Sets A, B; 364, 520 **TE:** 251–252A, 253A–256B, 257A–260B, 261A–264B, 265A–268B, 269A–272B, Reteaching: 275–276 Sets A, B; 364–364C, 520–520C

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1.G Geometry	
Reason with shapes and their attributes.	
1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g. color, orientation, overall size); build and draw shapes that possess defining attributes.	**SE:** 555–556, 557–560, 561–564, 565–568, 577–580, 581–584, 589–592, Reteaching: 595–598 Sets A, B, E, G, H; 608 **TE:** 555–556A, 557A–560B, 561A–564B, 565A–568B, 577A–580B, 581A–584B, 589A–592B, Reteaching: 595–598 Sets A, B, E, G, H; 608–608C
1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. Students do not need to learn formal names such as "right rectangular prism."	**SE:** 555–556, 569–572, 573–576, 585–588, 589–592, Reteaching: 596–597 Sets C, D, F, H; 608 **TE:** 555–556A, 569–572B, 573–576B, 585A–588B, 589A–592B, Reteaching: 595–598 Sets C, D, F, H; 608–608C
1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Note: fraction notation (1/2, 1/4) is not expected at this grade level. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	**SE:** 607, 608, 609–612, 613–616, 617–620, 621–624, Reteaching: 627–628 Sets A–D **TE:** 607–607A, 608–608C, 609A–612B, 613A–616B, 617A–620B, 621A–624B, Reteaching: 627–628 Sets A–D

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Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **Student's Edition and Teacher's Edition pages** 13–16, 21–24, 37–40, 41–44, 69–72, 77–80, 113–116, 117–120, 141–144, 149–152, 165–168, 169–172, 193–196, 197–200, 205–208

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2. Reason abstractly and quantitatively.	**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. **Student's Edition and Teacher's Edition pages** 5–8, 13–16, 17–20, 21–24, 25–28, 33–36, 37–40, 41–44, 73–76, 97–100, 105–108, 109–112, 149–152, 153–156, 157–160
3. Construct viable arguments and critique the reasoning of others.	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. **Student's Edition and Teacher's Edition pages** 29–32, 41–44, 69–72, 77–80, 93–96, 105–108, 117–120, 137–140, 141–144, 149–152, 157–160, 169–172, 189–192, 201–204, 217–220

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4. Model with Mathematics.	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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 21–24, 29–32, 33–36, 41–44, 61–64, 65–68, 73–76, 77–80, 101–104, 109**–**112, 137–140, 141–144, 145–148
5. Use appropriate tools strategically.	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. **Student's Edition and Teacher's Edition pages** 29–32, 73–76, 93–96, 97–100, 117–120, 137–140, 189–192, 193–196, 209–212, 237–240, 245–248, 261–264, 305–308, 349–352, 377–380

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6. Attend to precision.	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. **Student's Edition and Teacher's Edition pages** 9–12, 37–40, 61–64, 77–80, 113–116, 197–200, 201–204, 253–256, 261–264, 301–304, 333–336, 341–344, 349–352, 353–356, 357–360
7. Look for and make use of structure.	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. **Student's Edition and Teacher's Edition pages** 9–12, 13–16, 17–20, 25–28, 61–64, 65–68, 69–72, 77–80, 101–104, 145–148, 153–156, 161–164, 189–192, 201–204, 217–220

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8. Look for and express regularity in repeated reasoning.	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. **Student's Edition and Teacher's Edition pages** 5–8, 17–20, 25–28, 33–36, 65–68, 77–80, 105–108, 153–156, 157–160, 165–168, 205–208, 281–284, 345–348, 353–356, 357–360

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2.OA Operations and Algebraic Thinking	
Represent and solve problems involving addition and subtraction.	
2.0A.1 Use addition and subtraction within 100 to solve one-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all position.	**SE:** 4, 37–40, 41–44, Reteaching: 50 Sets G, H; 77–80, Reteaching: 84 Sets C, D; 92, 113–116, 117–120, Reteaching: 123–125 Set E; 136, 141–144, 145–148, 165–168, 169–172, Reteaching: 175–178 Sets G, H; 187, 188, 213–216, 217–220, Reteaching: 226 Sets F-H; 236, 245–248, 257–260, 261–264, Reteaching: 268–269 Sets F-G; 279, 280, 281–284, 285–288, 289–292, 309–312, Reteaching: 315–316 Sets A–C, H; 341–344, 345–348, Reteaching: 364–365 Sets B, C; 609–612, 613–616, 617–620, 621–624, 625–628, Reteaching: 631–632 Sets A–D; 649–652, 657–660, 661–664, Reteaching: 668, 670 Sets B, D **TE:** 4-4C 37A–40B, 41A–44B, Reteaching: 49–50 Sets G, H; 77A**–**80B, Reteaching: 84 Sets C, D; 92–92C, 113A–116B, 117A–120B, Reteaching: 123–126 Set E; 136–136A, 141A– We'd 144B, 145A–148B, 165A–168B, 169A–172B, Reteaching: 175–178 Sets G, H; 187–187A, 188–188C, 213A–216B, 217A–220B, Reteaching: 225–226 Sets F-H; 236–236A, 245A–248B, 257A–260B, 261A–264B, Reteaching: 267–270 Sets F-G; 279–279A, 280–280C, 281A–284B, 285A–288B, 289A–292B, 309A–312B, Reteaching: 315–316 Set A–C, H; 341A–344B, 345A–348B, Reteaching: 363–366 Sets B, C; 609A–612B, 613A–616B, 617A–620B, 621A–624B, 625A–628B, Reteaching: 631–632 Sets A–D; 649A–652B, 657A–660B, 661A–664B, Reteaching: 668, 670 Sets B, D

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Add and subtract within 20.	
2.0A.2 Fluently (efficiently, accurately, and flexibly) add and subtract within 20 using mental strategies (counting on, making a ten, decomposing a number, creating an equivalent but easier and known sum, and using the relationship between addition and subtraction) Work with equal groups of objects to gain foundations for multiplication.	**SE:** 3, 4, 5–8, 9–12, 13–16, 17–20, 21–24, 25–28, 29–32, 33–36, 37–40, 41–44, Reteaching: 47–50 Sets A–H; 60, 61–64, 65–68, 69–72, 73–76, 77–80, Reteaching: 83–84 Sets A–D; 91, 301–304, Reteaching: 317 Set F; 561–564, Reteaching: 595 Set A **TE:** 3–3A, 4–4C, 5A–8B, 9A–12B, 13A–16B, 17A–20B, 21A–24B, 25A–28B, 29A–32B, 33A–36B, 37A–40B, 41A–44B, Reteaching: 47–50 Sets A–H; 60–60A, 61A–64B, 65A–68B, 69A–72B, 73A–76B, 77A–80B, Reteaching: 83–84 Sets A–D; 91–91A, 301A–304B, Reteaching: 317–318 Set F; 561A–564B, Reteaching: 595–596 Set A
Work with equal groups of objects to gain foundations for multiplication.	
2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, (e.g. by pairing objects or counting them by 2s); write an equation to express an even number as a sum of two equal addends.	**SE:** 60, 61–64, 65–68, Reteaching: 83 Set A **TE:** 60–60A, 61A–64B, 65A–68B, Reteaching: 83 Set A
2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**SE:** 69–72, 73–76, 77–80, Reteaching: 83–84 Sets B–D; 92, 136, 577–580, 585–588, 589–592, Reteaching: 597–598 Sets E, G, H **TE:** 69A–72B, 73A–76B, 77A–80B, Reteaching: 83–84 Sets B–D; 92–92C, 135–136A, 577A–580B, 585A–588B, 589A–592B, Reteaching: 597–598 Sets E, G, H
2.NBT Number and Operations in Base Ten	
Understand place value	
2.NBT.1 Understand that the digits of a three-digit number represent amounts of hundreds, tens, and ones.	**SE:** 376, 381–384, 385–388, 389–392, 405–408, 409–412, Reteaching: 419–422 Sets B, C, G **TE:** 376–376C, 381A–384B, 385A–388B, 389A–392B, 405A–408B, 409A–412B, Reteaching: 419–422 Sets B, C, G

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2.NBT.1a Understand 100 can be thought of as a bundle of ten tens, called a "hundred."	**SE:** 377–380, 393–396, Reteaching: 419–420 Sets A, D **TE:** 377A–380B, 393A–396B, Reteaching: 419–420 Sets A, D
2.NBT.1b Understand the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900, refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	**SE:** 377–380, 381–384, 385–388, Reteaching: 419 Set A **TE:** 377A–380B, 381A–384B, 385A–388B, Reteaching: 419–420 Set A
2.NBT.1c Show flexibility in composing and decomposing hundreds, tens and ones (e.g. 207 can be composed from 2 hundreds 7 ones OR 20 tens 7 ones OR 207 ones OR 1 hundred 10 tens 7 ones 0R 1 hundred 9 tens 17 ones, etc.)	**SE:** 376, 381–384, 385–388, 389–392, 405–408, 409–412, Reteaching: 419–422 Sets B, C, G **TE:** 376–376C, 381A–384B, 385A–388B, 389A–392B, 405A–408B, 409A–412B, Reteaching: 419–422 Sets B, C, G
2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.	**SE:** 329–332, 333–336, 337–340, 349–352, 353–356, 357–360, Reteaching: 363–366 Sets A, B, D–F; 375, 376, 397–400, 401–404, 413–416, Reteaching: 421–422 Sets E, F, H; 437–440, 477–480 **TE:** 329A–332B, 333A–336B, 337A–340B, 349A–352B, 353A–356B, 357A–360B, Reteaching: 363–366 Sets A, B, D–F; 375-375A, 376-376C, 397A–400B, 401A–404B, 413A–416B, Reteaching: 421–422 Sets E, F, H; 437A–440B, 477A–480B
2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	**SE:** 376, 381–384, 385–388, 389–392, 393–396, Reteaching: 419–420 Sets B, C, D **TE:** 376–376C, 381A–384B, 385A–388B, 389A–392B, 393A–396B, Reteaching: 419–420 Sets B, C, D
2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, < symbols to record the results of comparisons.	**SE:** 375, 405–408, 409–412, 413–416, Reteaching: 422 Sets G, H **TE:** 375–375A, 405A–408B, 409A–412B, 413A–416B, Reteaching: 421–422 Sets G, H

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Use place value understanding and properties of operations to add and subtract.	
2.NBT.5 Fluently (efficiently, accurately, and flexibly) add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction (e.g. using friendly or benchmark numbers, using related equations, compensation, number line, etc.).	**SE:** 92, 93–96, 97–100, 101–104, 105–108, 109–112, 113–116, 117–120, Reteaching: 123–125 Sets A–F; 136, 137–140, 141–144, 145–148, 149–152, 153–156, 157–160, 161–164, 165–168, 169–172, Reteaching: 175–178 Sets A–H; 187, 188, 189–192, 193–196, 197–200, 201–204, 205–208, 209–212, 213–216, 217–220, Reteaching: 223–226 Sets A–H; 236, 237–240, 241–244, 245–248, 249–252, 253–256, 257–260, Reteaching: 267–269 Sets A–F; 279, 280, 281–284, 285–288, 289–292, 293–296, 297–300, 305–308, Reteaching: 315–318 Sets A–D, G **TE:** 92–92C, 93A–96B, 97A–100B, 101A–104B, 105A–108B, 109A–112B, 113A–116B, 117A–120B, Reteaching: 123–126 Sets A–F; 136–136A, 137A–140B, 141A–144B, 145A–148B, 149A–152B, 153A–156B, 157A–160B, 161A–164B, 165A–168B, 169A–172B, Reteaching: 175–178 Sets A–H**;** 187–187A, 188–188C, 189A–192B, 193A–196B, 197A–200B, 201A–204B, 205A–208B, 209A–212B, 213A–216B, 217A–220B, Reteaching: 223–226 Sets A–H; 236–236A, 237A–240B, 241A–244B, 245A–248B, 249A–252B, 253A–256B, 257A–260B, Reteaching: 267–270 Sets A–F; 279–279A, 280–280C, 281A–284B, 285A–288B, 289A–292B, 293A–296B, 297A–300B, 305A–308B, Reteaching: 315–318 Sets A–D, G
2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	**SE:** Reteaching: 124–125 Sets D, E; 136, 157–160, 161–164, 165–168, 169–172, Reteaching: 177–178 Sets F–H; 279, Reteaching: 318 Set G **TE:** Reteaching: 124–125 Sets D, E; 136–136A, 157A–160B, 161A–164B, 165A–168B, 169A–172B, Reteaching: 177–178 Sets F–H; 279–279A, Reteaching: 317–318 Set G

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2.NBT.7 Add and subtract within 1000, using concrete models or drawings, and strategies based on place value, properties or operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, like base-ten units such as hundreds and hundreds, tens and tens, ones and ones are used; and sometimes it is necessary to compose or decompose tens of hundreds.	**SE:** 432, 437–440, 441–444, 445–448, 449–452, 453–456, 457–460, Reteaching: 463–464 Sets B–D; 472, 477–480, 481–484, 485–488, 489–492, 493–496, Reteaching: 499–200 Sets B–D **TE:** 432–432A, 437–440B, 441–444B, 445–448B, 449–452B, 453–456B, 457–460B, Reteaching: 463–464 Sets B–D; 472–472C, 477–480B, 481–484B, 485–488B, 489A–492B, 493A–496B, Reteaching: 499–200 Sets B–D
2.NBT.8 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.	**SE:** 376, 397–400, 401–404, 413–416, Reteaching: 421–422 Sets E, F, H; 433–436, Reteaching: 463 Set A; 473–476, Reteaching: 499 Set A **TE:** 376–376C, 397A–400B, 401A–404B, 413A–416B, Reteaching: 421–422 Sets E, F, H; 433A–436B, Reteaching: 463 Set A; 473A–476B, Reteaching: 499 Set A
2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. The explanations given may be supported by drawings or objects.	**SE:** 92, 93–96, 97–100, 101–104, 109–112, 117–120, Reteaching: 123–125 Sets A–F; 137–140, 141–144, 145–148, 149–152, 153–156, 157–160, 161–164, 169–172, Reteaching: 175–178 Sets A–H; 187, 188, 189–192, 193–196, 197–200, 201–204, 205–208, 209–212, 217–220, Reteaching: 223–226 Sets A–F, H; 237–240, 241–244, 245–248, 249–252, 253–256, 261–264, Reteaching: 267–269 Sets A–F; 309–312, Reteaching: 318 Set H; 433–436, 437–440, 441–444, 445–448, 449–452, 453–456, 457–460, Reteaching: 463–464 Sets A–D; 472, 473–476, 477–480, 481–484, 485–488, 489–492, 493–496, Reteaching: 499–500 Sets A, B, C

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(Continued) 2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. The explanations given may be supported by drawings or objects.	**TE:** 92–92C, 93A–96B, 97A–100B, 101A–104B, 109A–112B, 117A–120B, Reteaching: 123–126 Sets A–F; 137A–140B, 141A–144B, 145A–148B, 149A–152B, 153A–156B, 157A–160B, 161A–164B, 169A–172B, Reteaching: 175–178 Sets A–H; 187–187A, 188–188C, 189A–192B, 193A–196B, 197A–200B, 201A-204B, 205A–208B, 209A–212B, 217A–220B, Reteaching: 223–226 Sets A–F, H; 237A–240B, 241A–244B, 245A–248B, 249A–252B, 253A–256B, 261A–264B, Reteaching: 267–270 Sets A–F; 309A–312B, Reteaching: 317–318 Set H; 433A–436B, 437A–440B, 441A–444B, 445A–448B, 449A–452B, 453A–456B, 457A–460B, Reteaching: 463–464 Sets A–D; 472–472C, 473A–476B, 477A–480B, 481A–484B, 485A–488B, 489A–492B, 493A–496B, Reteaching: 499–500 Sets A, B, C
2.MD Measurement and Data	
Measure and estimate lengths in standard units.	
2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	**SE:** 513–516, 517–520, 521–524, 525–528, 529–532, 533–536, 541–544, Reteaching: 547–550 Sets B–F, H; 560, 565–568, 569–572, 573–576, Reteaching: 595–596 Sets B–D; 641–644, 645–648, Reteaching: 667 Set A **TE:** 513A–516B, 517A–520B, 521A–524B, 525A–528B, 529A–532B, 533A–536B, 541A–544B, Reteaching: 547–550 Sets B–F, H; 560–560C, 565A–568B, 569A–572B, 573A–576B, Reteaching: 595–596 Sets B–D; 641A–644B, 645A–648B, Reteaching: 667–668 Set A
2.MD.2 Measure the length of an object twice, using different “length units” of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	**SE:** 521–524, 533–536, Reteaching: 548–549 Sets C, F; 581–584, Reteaching: 597 Set F **TE:** 521A–524B, 533A–536B, Reteaching: 548–549 Sets C, F; 581A–584B, Reteaching: 597–598 Set F

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2.MD.3 Estimate lengths using whole units of inches, feet, centimeters, and meters.	**SE:** 509–512, 513–516, 517–520, 525–528, 529–532, 541–544, Reteaching: 547–550 Sets A, B, D, E, H **TE:** 509A–512B, 513A–516B, 517A–520B, 525A–528B, 529A–532B, 541A–544B, Reteaching: 547–550 Sets A, B, D, E, H
2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit (inches, feet, centimeters, and meters).	**SE:** 537–540, 541–544, Reteaching: 550 Sets G, H; 560 **TE:** 537A–540B, 541A–544B, Reteaching: 549–550 Sets G, H; 560–560
Relate addition and subtraction to length.	
2.MD.5 Use addition and subtraction within 100 to solve one- and two-step problems involving lengths that are given in the same units, e.g. by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem..	**SE:** 537–560, Reteaching: 549–550 Sets F, G; 560, 609–612, 613–616, 617–620, 625–628, Reteaching: 631–632 Sets A–D **TE:** 537A–540B, Reteaching: 549–550 Sets F, G; 560–560C, 609A–612B, 613A–616B, 617A–620B, 625A–628B, Reteaching: 631–632 Sets A–D
2.MD.6 Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to the numbers o, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line.	**SE:** 621–624, 625–628, Reteaching: 632 Sets C–D **TE:** 621A–624B, 625A–628B, Reteaching: 632 Sets C–D
Work with time and money.	
2.MD.7 Tell and write time from analog and digital clocks in five minutes.	**SE:** 328, 349–352, 353–356, 357–360, Reteaching: 365–366 Sets D–F **TE:** 328–328A, 349A–352B, 353A–356B, 357A–360B, Reteaching: 365–366 Sets D–F

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2.MD.8 Solve word problems involving dollar bills, quarters, dines, nickels, and pennies, using $ and ¢ symbols appropriately (Do not use decimal point, if showing 25 cents, use the word cents or ¢). For example: if you have 2 dimes and 3 pennies, how many cents do you have?	**SE:** 329–332, 333–336, 337–340, 341–344, 345–348, 376, 433–436, 473–476, 485–488 **TE:** 329A–332B, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 376–376C, 433A–436B, 473A–476B, 485A–488B
2MD.9 Identify coins and bills and their values.	**SE:** 327, 329–332, 333–336, 337–340, 341–344, 345–348, 376, 433–436, 473–476 **TE:** 327-328A, 329A–332B, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 376–376C, 433A–436B, 473A–476B
Represent and interpret data.	
2.MD.10 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object using different units. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	**SE:** 640, 641–644, 645–648, Reteaching: 667 Set A **TE:** 640–640C, 641A–644B, 645A–648B, Reteaching: 667–668 Set A
2.MD.11 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	**SE:** 640, 649–652, 653–656, 657–660, 661–664, Reteaching: 667–670 Sets B–D **TE:** 640–640C, 649A–652B, 653A–656B, 657A–660B, 661A–664B, Reteaching: 667–670 Sets B–D
2.G Geometry	
Reason with shapes and their attributes.	
2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	**SE:** 560, 561–564, 565–568, 569–572, 573–576, Reteaching: 595–596 Sets A–D **TE:** 560–560C, 561A–564B, 565A–568B, 569A–572B, 573A–576B, Reteaching: 595–596 Sets A–D

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2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	**SE:** 577-580, 589-592, Reteaching: 597-598 Sets E, H **TE:** 577A-580B, 589A-592B, Reteaching: 597-598 Sets E, H
2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. *Note: fraction notation* $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}$ *is not expected at this grade level.* Recognize that equal shares of identical wholes need not have the same shape.	**SE:** 581–584, 585–588, 589–592, Reteaching: 597–598 Sets F, G, H **TE:** 581A–584B, 585A–588B, 589A–592B, Reteaching: 597–598 Sets F, G, H

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Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 17–20, 25–28, 41–44, 49–52, 61–64, 81–84, 89–92, 93–96, 97–100, 101–104, 117–120, 121–124, 125–128

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2. Reason abstractly and quantitatively.	**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. **Student's Edition and Teacher's Edition pages** 9–12, 21–24, 45–48, 53–56, 61–64, 93–96, 97–100, 117–120, 121–124, 125–128, 129–132, 133–136, 141–144, 145–148, 149–152
3. Construct viable arguments and critique the reasoning of others.	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. **Student's Edition and Teacher's Edition pages** 13–16, 25–28, 41–44, 45–48, 57–60, 61–64, 77–80, 101–104, 133–136, 141–144, 149–152, 173–176, 177–180, 189–192, 209–212

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4. Model with Mathematics.	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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 17–20, 21–24, 25–28, 61–64, 85–88, 93–96, 125–128, 137–140, 141–144, 181–184, 189–192, 221–224, 225–228
5. Use appropriate tools strategically.	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. **Student's Edition and Teacher's Edition pages** 13–16, 25–28, 49–52, 57–60, 81–84, 117–120, 181–184, 209–212, 233–236, 257–260, 317–320, 341–344, 353–356, 357–360, 381–384

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6. Attend to precision.	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. **Student's Edition and Teacher's Edition pages** 17–20, 49–52, 57–60, 77–80, 137–140, 145–148, 149–152, 169–172, 217–220, 233–236, 253–256, 61–264, 269–272, 305–308, 309–312
7. Look for and make use of structure.	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. **Student's Edition and Teacher's Edition pages** 13–16, 25–28, 41–44, 45–48, 53–56, 77–80, 81–84, 85–88, 89–92, 101–104, 121–124, 129–132, 137–140, 169–172, 177–180

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8. Look for and express regularity in repeated reasoning.	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. **Student's Edition and Teacher's Edition pages** 21–24, 53–56, 97–100, 101–104, 133–136, 145–148, 181–184, 185–188, 221–224, 225–228, 269–272, 293–296, 345–348, 353–356, 389–392
3.OA Operations and Algebraic Thinking	
Represent and solve problems involving multiplication and division.	
3.OA.1 Interpret products of whole numbers, (e.g. interpret $5 \cdot 7$ as the total number of objects in 5 groups of 7 objects each.)	**SE:** 3, 4, 5–8, 9–12, 13–16, 25–28, Reteaching: 31–32 Sets A–C, E; 41–44, 45–48, 49–52, 53–56, 57–60, Reteaching: 67–68 Sets A–E; 185–188, Reteaching: 197–198 Set E **TE:** 3–3A, 4–4C, 5A–8B, 9A–12B, 13A–16B, 25A–28B, Reteaching: 31–32 Sets A–C, E; 41A–44B, 45A–48B, 49A–52B, 53A–56B, 57A–60B, Reteaching: 67–68 Sets A–E; 185A–188B, 197–198
3.OA.2 Interpret whole-number quotients of whole numbers, (e.g. interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.)	**SE:** 4, 17–20, 21–24, 25–28, Reteaching: 32 Sets D, E; 185–188, Reteaching: 197–198 Set E **TE:** 4–4C, 17A–20B, 21A–24B, 32, Reteaching: 25A–28B Sets D, E; 185A–188B, Reteaching: 197–198 Set E

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3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, (e.g. by using drawings and equations with a symbol for the unknown number to represent the problem.)	**SE:** 3, 4, 5–8, 9–12, 13–16, 17–20, 21–24, 25–28, Reteaching: 31–32 Sets A–E; 39–40, 41–44, 45–48, 49–52, 53–56, 57–60, 61–64, Reteaching: 67–68 Sets A–F; 76, 81–84, 85–88, 89–92, 93–96, 97–100, Reteaching: 107–108 Sets B–E; 117–120, 121–124, 125–128, 129–132, 133–136, 137–140, 141–144, 145–148, 149–152, Reteaching: 155–158 Sets A–I; 167, 168, 177–180, 181–184, 185–188, 189–192, Reteaching: 196–198 Sets C–F; 252, 253–256, 257–260, 261–264, 265–268, 269–272, Reteaching: 275–278 Sets A–D; 385–388, Reteaching: 399 Set B; 408, 561–564,Reteaching: 574 Set H; 617–620, Reteaching: 639 Set A **TE:** 3–3A, 4–4C, 5A–8B, 9A–12B, 13A–16B, 17A–20B, 21A–24B, 25A–28B, Reteaching: 31–32 Sets A–E; 39–40A, 41A–44B, 45A–48B, 49A–52B, 53A–56B, 57A–60B, 61A–64B, Reteaching: 67–68 Sets A–F; 76–76C, 81A–84B, 85A–88B, 89A–92B, 93A–96B, 97A–100B, Reteaching: 107–108 Sets B–E; 117A–120B, 121A–124B, 125A–128B, 129A–132B, 133A–136B, 137A–140B, 141A–144B, 145A–148B, 149A–152B, Reteaching: 155–158 Sets A–I; 167–167A, 168–168C, 177A–180B, 181A–184B, 185A–188B, 189A–192B, 195–198, 252–252C, 253A–256B, 257A–260B, 261A–264B, 265A–268B, 269A–272B, Reteaching: 275–278 Sets A–D; 385A–388B, Reteaching: 399 Set B; 408–408C, 561A–564B, Reteaching: 573–574 Set H; 617A–620B, Reteaching: 639 Set A

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3.OA.4 Determine the unknown whole number in a multiplication or division equation by using related equations. For example, determine the unknown number that makes the equation true in each of the equations 8 x ? = 48; 5 = __ ÷ 3; 6 x 6 = __.	**SE:** 141–144, 145–148, Reteaching: Sets 157–158, G, H; 168, 221–224, Reteaching: 240 Set D **TE:** 141A–144B, 145A–148B, Reteaching: 157–158 Sets G, H; 168–168C, 221A–224B, Reteaching: 239–240 Set D
Understand properties of multiplication and the relationship between multiplication and division.	
3.OA.5 Apply properties of operations as strategies to multiply and divide. Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 – 30. (Associative property of multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 +2) = (8 x 5) + (8 x 2 = 40 + 16 = 56 (Distributive Property.) Students need not use formal terms for these properties.	**SE:** 4, 13–16, Reteaching: 31–32 Set C; 49–52, Reteaching: 67 Set C; 75, 76, 77–80, 81–84, 85–88, 89–92, 93–96, 97–100, 101–104, Reteaching: 107–108 Sets A–F; 137–140, Reteaching: 157 Set F; 389–392, Reteaching: 400 Set C **TE:** 4-4C, 13A–16B, Reteaching: 31–32 Set C; 49A–52B, Reteaching: 67 Set C; 75–75A, 76–76C, 77A–80B, 81A–84B, 85A–88B, 89A–92B, 93A–96B, 97A–100B, 101A–104B, Reteaching: 107–108 Sets A–F; 137A–140B, Reteaching: 157–158 Set F; 389A–392B, Reteaching: 400 Set C
3.OA.6 Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	**SE:** 117–120, 121–124, 125–128, 129–132, 137–140, Reteaching: 55–157 Sets A–D, F, G **TE:** 117–120, 121–124, 125–128, 129–132, 137–140, 141–144, Reteaching: 155–157 Sets A–D, F, G

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Multiply and divide within 100.	
3.OA.7 Fluently (efficiently, accurately, and flexibly) multiply and divide with single digit multiplications and related divisions using strategies (e.g. relationship between multiplication and division, doubles, double and double again, half and then double, etc.) or properties of operations.	**SE:** 49–52, Reteaching: 67 Set C; 76, 77–80, 81–84, 85–88, 89–92, 93–96, 97–100, Reteaching: 107–108 Sets A–E; 117–120, 121–124, 125–128, 129–132, 133–136, 137–140, 141–144, 145–148, 155–Reteaching: 158 Sets A–H; 167, 168, 169–172, 173–176, 177–180, 181–184, 185–188, 189–192, 195–Reteaching: 198 Sets A–F; 221–224, 225–228, 229–232, 233–236, Reteaching: 240–242 Sets D–G; 297–300, 313–316, Reteaching: 324–325 Sets C, G; 345–348, 349–352, Reteaching: 368–369 Sets C, D; 413–416, 417–420, 421–424, Reteaching: 427–428 Sets B–D; 561-564, Reteaching: 574 Set H; 617-620-625-628, 629-632, Reteaching: 639-640 Sets A, C **TE:** 49A–52B, Reteaching: 67 Set C; 76–76C, 77A–80B, 81A–84B, 85A–88B, 89A–92B, 93A–96B, 97A–100B, Reteaching: 107–108 Sets A–E; 117A–120B, 121A–124B, 125A–128B, 129A–132B, 133A–136B, 137A–140B, 141A–144B, 145A–148B, Reteaching: 155–158 Sets A–H; 167–167A, 168–168C, 169A–172B, 173A–176B, 177A–180B, 181A–184B, 185A–188B, 189A–192B, Reteaching: 195–198 Sets A–F; 221A–224B, 225A–228B, 229A–232B, 233A–236B, 239–242, 297A–300B, 313A–316B, Reteaching: 323–326 Sets C, G; 345A–348B, 349A–352B, Reteaching: 367–370 Sets C, D; 413A–416B, 417A–420B, 421A–424B, Reteaching: 427–428 Sets B–D; 561A–564B, Reteaching: 574 Set H; 617A-620B, 625A-628B, 629A-632B, Reteaching: 639-640 Sets A, C

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Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
3.OA.8 Solve two-step word problems using any of the four operations. Represent these problems using both situation equations and/or solution equations with a letter or symbol standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole-number answers.	**SE:** 149–152, Reteaching: 158 Set I; 168, 253–256, 265–268, Reteaching: 275–277 Sets A, C; 287– 288, 289–292, 297–300, 301–304, 305–308, 313–316, 317–320, Reteaching: 323–326 Sets A, C–E, G, H; 336, 337–340, 341–344, 345–348, 349–352, 353–356, 357–360, 361–364, Reteaching: 367–370 Sets A–G; 381-384, Reteaching: 399 Set A; 407, 408, 409–412, 413–416, 417–420, 421–424, Reteaching: 427–428 Sets A–D; 621–624, Reteaching: 639 Set B **TE:** 149A–152B, Reteaching: 157–158 Set I; 168–168C, 253A–256B, 265A–268B, Reteaching: 275–278 Sets A, C; 287–288A, 289A–292B, 297A–300B, 301A–304B, 305A–308B, 313A–316B, 317A–320B, Reteaching: 323–326 Sets A, C–E, G, H; 336–336C, 337A–340B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 357A–360B, 361A–364B, Reteaching: 367–370 Sets A–G; 381A–384B, Reteaching: 399 Set A; 407–407A, 408–408C, 409A–412B, 413A–416B, 417A–420B, 421A–424B, Reteaching: 427–428 Sets A–D; 621A–624B, Reteaching: 639 Set B
3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 ties a number can be decomposed into two equal addends.	**SE:** 41–44, 45–48, 53–56, 57–60, Reteaching: 67–68 Sets A–E; 81–84, 85–88, 89–92, Reteaching: 107–108 Sets B–D; 133–136, Reteaching: 157 Set E; 169–172, 189–192, Reteaching: 195–198 Sets A, F; 293–296, Reteaching: Set B; 393–396, Reteaching: 400 Set D **TE:** 41A–44B, 45A–48B, 53A–56B, 57A–60B, Reteaching: 67–68 Sets A–E; 81A–84B, 85A–88B, 89A–92B, Reteaching: 107–108 Sets B–D; 133A–136B, Reteaching: 157–158 Set E; 169A–172B, 189A–192B, Reteaching: 195–198 Sets A, F; 293A–296B, Reteaching: 323–324 Set B; 393A–396B, Reteaching: 400 Set D

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3.NBT Number and Operations in Base Ten	
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
3.NBT.1 Use place value understanding to round whole numbers to the nearest 10-or 100.	**SE:** 287–288, 305–308, 309–312, Reteaching: 324–325 Sets E, F; 336 **TE:** 287–288A, 305A–308B, 309A–312B, Reteaching: 323–326 Sets E, F; 336–336C
3.NBT.2 Fluently (efficiently, accurately, & flexibly) add and subtract within 1,000 using strategies (e.g. composing/decomposing by like base-10 units, using friendly or benchmark numbers, using related equations, compensation, number line, etc.) and algorithm (including, but not limited to: traditional, partial-sums, etc.) based on place value, properties of operations, and/or the relationship between addition and subtraction.	**SE:** 287–288, 289–292, 297–300, 301–304, 309–312, 313–316, 317–320, Reteaching: 323–326 Sets A, C, D, F–H; 335, 336, 337–340, 341–344, 345–348, 349–352, 353–356, 357–360, 361–364, Reteaching: 367–370 Sets A–G; 408, 409–412, 417–420, 421–424, Reteaching: 427–428 Sets A, C, D; 541–544, Reteaching: 572 Set C; 621–624, Reteaching: 639 Set B **TE:** 287–288A, 289A–292B, 297A–300B, 301A–304B, 309A–312B, 313A–316B, 317A–320B, Reteaching: 323–326 Sets A, C, D, F–H; 335–335A, 336–336C, 337A–340B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 357A–360B, 361A–364B, Reteaching: 367–370 Sets A–G; 408-408C, 409A–412B, 417A–420B, 421A–424B, Reteaching: 427–428 Sets A, C, D; 541A–544B, Reteaching: 572 Set C; 621A–624B, Reteaching: 639 Set B
3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g. 9 x 80, 5 x 60) using strategies based on place value and properties of operations.	**SE:** 379–380, 381–384, 385–388, 389–392, 393–396, Reteaching: 399–400 Sets A–D **TE:** 379–380A, 381A–384B, 385A–388B, 389A–392B, 393A–396B, Reteaching: 399–400 Sets A–D

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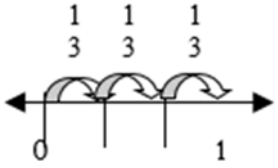
3.NF Number and Operations - Fractions	
Develop understanding of fractions as numbers.	
3.NF.1 Understand a fraction *1/b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a/b* as the quantity formed by *a* parts of size $1/b$.	**SE:** 435-436, 437–440, 441–444, 445–448, 449-452, 453-456, 457-460, 461-464 465–468, Reteaching: 471–474 Sets A–D, H; 484, 485–488, 489–492, Reteaching: 519-522 Sets A, B; 585-588, 589-592 **TE:** 435–436A, 437A–440B, 441A–444B, 445A–448B, 465A–468B, Reteaching: 471–474 Sets A–C, H; 484–484C, 485A–488B, 489A–492B, Reteaching: 519-522 Sets A, B; 585A-585B, 589A-592B
3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line.	**SE:** 435-436, 437–440, 441–444, 445–448, 465–468, Reteaching: 471–474 Sets A–C, H; 484, 585–588, 589–592, Reteaching: 603 Sets A, B **TE:** 435–436A, 437A–440B, 441A–444B, 445A–448B, 465A–468B, Reteaching: 471–474 Sets A–C, H; 484–484C, 585A–588B, 589A–592B, Reteaching: 603 Sets A, B
3.NF. 2a Represent a fraction *1/b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size *1/b* and that the endpoint of the part based at 0 locates the number *1/b* on the number line. Ex:  	**SE:** 435–436, 449–452, 453–456, 457–460, 461–464, Reteaching: 472–474 Sets D–G **TE:** 435–436A, 449A–452B, 453A–456B, 457A–460B, 461A–464B, Reteaching: 471–474 Sets D–G
3NF.2b Represent a fraction *a/b* number line diagram by marking off *a* lengths *1/b* from 0. Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line (*a* is the countable units of *1/b* that determines the place on the number line).	**SE:** 449–452, 453–456, 457–460, 461–464, Reteaching: 472–474 Sets D–G **TE:** 449A–452B, 453A–456B, 457A–460B, 461A–464B, Reteaching: 471–474 Sets D–G

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3.NF.3 Explain equivalence of fractions and compare fractions by reasoning about their size (it is a mathematical convention that when comparing fractions, the whole is the same size).	**SE:** 483, 484, 485–488, 489–492, 493–496, 497–500, 501–504, 505–508, 509–512, 513–516, Reteaching: 519–522 Sets A-H **TE:** 483-483A, 484-484C, 485A–488B, 489A–492B, 493A–496B, 497A–500B, 501A–504B, 505A–508B, 509A–512B, 513A–516B, Reteaching: 519–522 Sets A-H
3.NF.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	**SE:** 483, 484, 485–488, 489–492, 505–508, 509–512, Reteaching: 519–522 Sets A, B, F, G **TE:** 483-483A, 484-484C, 485A–488B, 489A–492B, 505A–508B, 509A–512B, Reteaching: 519–522 Sets A, B, F, G
3.NF.3b Recognize and generate equivalent fractions, (e.g. 1/2 = 2/4, = 2/3.) Explain why the fractions are equivalent, e.g. by using a visual fraction model.	**SE:** 483, 485–488, 489–492, 513–516, Reteaching: 519–522 Sets A, B, H **TE:** 483–483A, 485A–488B, 489A–492B, 513A–516B, Reteaching: 519–522 Sets A, B, H
3.NF.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.	**SE:** 445–448, Reteaching: 472 Set C; 484, 509–512, Reteaching: 522 Set G **TE:** 445A–448B, Reteaching: 471–472 Set C; 484–484C, 509A–512B, Reteaching: 521–522 Set G
3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the relational symbols >, <, =, ≠, and justify the conclusions.	**SE:** 483, 493–496, 497–500, 501–504, 513–516, Reteaching: 520–522 Sets C–E, H **TE:** 483–483A, 493A–496B, 497A–500B, 501A–504B, 513A–516B, Reteaching: 519–522 Sets C–E, H

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3.MD Measurement and Data	
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve one-step word problems involving addition and subtraction of time intervals in minutes.	**SE:** 531–532, 533–536, 537–540, 541–544, 565–568, Reteaching: 571–574 Sets A–C, I **TE:** 531–532A, 533A–536B, 537A–540B, 541A–544B, 565A–568B, Reteaching: 571–574 Sets A–C, I
3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Excludes cubed units such as cm^3 and finding the geometric volume of a container).	**SE:** 309–312, Reteaching: 325 Set F; 531–532, 545–548, 549–552, 553–556, 557–560, 561–564, Reteaching: 572–574 Sets D–H **TE:** 309A–312B, Reteaching: 325–326 Set F; 531–532A, 545A–548B, 549A–552B, 553A–556B, 557A–560B, 561A–564B, Reteaching: 571–574 Sets D–H
3.MD.3 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, (e.g. by using drawings (such as a beaker with a measurement scale) to represent the problem.) (Excludes multiplicative comparison problems)	**SE:** 309–312, Reteaching: 325 Set F; 531–532, 545–548, 549–552, 553–556, 557–560, 561–564, Reteaching: 572–574 Sets D–H **TE:** 309A–312B, Reteaching: 325–326 Set F; 531–532A, 545A–548B, 549A–552B, 553A–556B, 557A–560B, 561A–564B, Reteaching: 571–574 Sets D–H
Represent and interpret data.	
3.MD.4 Draw a scaled picture graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in a scaled bar graph. (For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	**SE:** 251, 252, 253–256, 257–260, 261–264, 265–268, 269–272, Reteaching: 275–278 Sets A-D; 417–420, Reteaching: 428 Set C **TE:** 251–251A, 252–252C, 253A–256B, 257A–260B, 261A–264B, 265A–268B, 269A–272B, Reteaching: 275–278 Sets A–D; 417A–420B, Reteaching: 428 Set C
3.MD.5 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot where the horizontal scale is marked off in appropriate units - whole numbers, halves, or quarters.	**SE:** 435–436, 457–460, 461–464, Reteaching: 473–474 Sets F, G **TE:** 435–436A, 457A–460B, 461A–464B, Reteaching: 473–474 Sets F, G

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Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
3.MD.6 Recognize area as an attribute of plane figures and understand concepts of area measurement.	**SE:** 252 **TE:** 252-252C
3.MD.6a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area (does not require standard square units).	**SE:** 207–208, 209–212, 213–216, 217–220, Reteaching: 239–240 Sets A–C **TE:** 207–208A, 209A–212B, 213A–216B, 217A–220B, Reteaching: 239–240 Sets A–C
3.MD.6b A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units (does not require standard square units).	**SE:** 209–212, 213–216, 217–220, Reteaching: 239–240 Sets A–C; 593–596, Reteaching: 604 Set C **TE:** 209A–212B, 213A–216B, 217A–220B, Reteaching: 239–240 Sets A–C; 593A–596B, Reteaching: 604 Set C
3.MD.7 Measure areas by counting unit squares (square cm, square m, square ft, and non-standard square units).	**SE:** 207–208, 209–212, 213–216, 217–220, Reteaching: 239–240 Sets A–C **TE:** 207–208A, 209A–212B, 213A–216B, 217A–220B, Reteaching: 239–240 Sets A–C
3.MD.8 Relate area to the operations of multiplication and addition.	**SE:** 101–104, Reteaching: 108 Set F; 252 **TE:** 101A–104B, Reteaching: 108 Set F; 252–252C
3.MD.8a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	**SE:** 221–224, 233–236, Reteaching: 242 Set G **TE:** 221A–224B, 233A–236B, Reteaching: 241–242 Set G
3.MD.8b Multiply side lengths to find areas of rectangles with whole-number side lengths in context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	**SE:** 221–224, 233–236, Reteaching: 242 Set G; 597–600, Reteaching: 604 Set D; 625–628, 629–632, Reteaching: 640 Set C **TE:** 221A–224B, 233A–236B, Reteaching: 241–242 Set G; 597A–600B, Reteaching: 604 Set D; 625A–628B, 629A–632B, Reteaching: 640 Set C

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3.MD.8c Use tiling to show in a concrete case that the area of a rectangle with whole-number side length *a* and side length *b* + *c* is the sum of *a* x *b* and *a* x *c*. Use area models to represent the distributive property in mathematical reasoning.	**SE:** 225-228, Reteaching: 241 Set E **TE:** 225A-228B, Reteaching: 241 Set E
3.MD.8d Recognize area as additive. Find areas of figures composed of non-overlapping rectangles, and apply this technique to solve real world problems.	**SE:** 229–232, 233–236, Reteaching: 242 Sets F–G **TE:** 229A–232B, 233A–236B, Reteaching: 241–242 Sets F–G
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
3.MD.9 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with same perimeter and different areas or with the same area and different perimeters	**SE:** 611–612, 613–616, 617–620, 621–624, 625–628, 629–632, 633–636, Reteaching: 639–640 Sets A–D **TE:** 611–612A, 613A–616B, 617A–620B, 621A–624B, 625A–628B, 629A–632B, 633A–636B, Reteaching: Sets A–D
3.G Geometry	
Reason with shapes and their attributes.	
3.G.1 Understand that shapes in different categories (e.g. rhombuses, rectangles, trapezoids, kites and others) may share attributes (e.g. having four sides), and that the shared attributes can define a larger category (e.g. quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. Refer to inclusive definitions noted in the glossary.	**SE:** 583, 584, 585–588, 589–592, 593–596, 597–600, Reteaching: 603–604 Sets A–D **TE:** 583–583A, 584–584C, 585A–588B, 589A–592B, 593A–596B, 597A–600B, Reteaching: 603–604 Sets A–D
3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 area of the shape.	**SE:** 435–436, 437–440, 441–444, Reteaching: 471 Sets A, B; 584, 585–588, 589–592, Reteaching: 603 Sets A, B **TE:** 435–436A, 437A–440B, 441A–444B, Reteaching: 471–472 Sets A, B; 584–584C, 585A–588B, 589A–592B, Reteaching: 603 Sets A, B

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Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **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

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2. Reason abstractly and quantitatively.	**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. **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
3. Construct viable arguments and critique the reasoning of others.	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. **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

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4. Model with mathematics.	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. **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
5. Use appropriate tools strategically.	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. **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

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6. Attend to precision.	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. **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
7. Look for and make use of structure.	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. **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

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8. Look for and express regularity in repeated reasoning.	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. **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
4.OA Operations and Algebraic Thinking	
Use the four operations with whole numbers to solve problems.	
4.OA.1 Interpret a multiplication equation as a comparison, (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.), Represent verbal statements of multiplicative comparisons as multiplication equations.	**SE:** 223–224, 225–228, 229–232, Reteaching: 251 Set A **TE:** 223–224A, 225A–228B, 229A–232B, Reteaching: 251 Set A

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4.OA.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.) **Additive Comparison** greater quantity lesser quantity difference **Multiplicative Comparison** unit Copies of multiplicative unit	**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
4OA.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 situation equations and/or solution equations with a letter or symbol standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. For Example: A clown had 20 balloons. He sold some and has 12 left. Each balloon costs $2. How much money did he make? Situation Equation: $20 - n = 12$ $n \times \$2 = \_\_$ Situation Equation: $20 - 12 = n$ $n \times \$2 = \_\_$	**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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Gain familiarity with factors and multiples.	
4.OA.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.	**SE:** 260, 261–264, 265–268, 269–272, 273–276, 277–280, Reteaching: 283–284 Sets A–E; 305–308, 521–524, 525–528 **TE:** 260–260C, 261A–264B, 265A–268B, 269A–272B, 273A–276B, 277A–280B, Reteaching: 283–284 Sets A–E; 305A–308B, 521A–524B, 525A–528B
Generate and analyze patterns.	
4.OA.5 Generate a number or shape pattern that follows a given rule. Identify and informally explain apparent features of the pattern that were not explicit in the rule itself. 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
4.NBT Number and Operations in Base Ten	
Generalize place value understanding for multi-digit whole numbers. *Note: Grade 4 expectations are limited to whole numbers less than or equal to 1,000,000.*	
4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.	**SE:** 4, 9–12, 21–24, Reteaching: 27 Set B **TE:** 4–4C, 9A–12B, 21A–24B, Reteaching: 27 Set B
4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, expanded form, and unit form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, <, =, and ≠ and symbols to record the results of comparisons. Note: Students should demonstrate understanding and application of place value decomposition. For example, 127 can be 1 hundred, 2 tens, 7 ones or 12 tens, 7 ones.	**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

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4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.	**SE:** 4, 17–20, 21–24, Reteaching: 28 Sets D, E **TE:**, 4–4C, 17A–20B, 21A–24B, Reteaching: 28 Sets D, E
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
4.NBT.4 Fluently add and subtract multi-digit whole numbers using an efficient algorithm, (including, but not limited to: traditional, partial-sums, etc.), based on place value understanding and the properties of operations.	**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; 80, 233–236, 237–240, 241–244, 521–524, 565–568 **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; 80–80C, 233A–236B, 237A–240B, 241A–244B, 521A–524B, 565A–568B
4.NBT.5 Multiply a whole number of up to four digits by a one-digit 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.	**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 **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

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4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**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 **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
4.NF Number and Operations – Fractions	
Extend understanding of fraction equivalence and ordering. *Note: Grade 4 expectations are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.*	
4.NF.1 Explain why a fraction a/b is equivalent to a fraction $a \times n / b \times n$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**SE:** 291–292, 293–296, 297–300, 301–304, 305–308, 313–316, 317–320, Reteaching: 323–324 Sets A, B; 421–424, 553–556 **TE:** 291–292, 293A–296B, 297A–300B, 301A–304B, 305A–308B, 313A–316B, 317A–320B, Reteaching: 323–324 Sets A, B; 421A–424B, 553A–556B
4.NF.2 Compare two fractions with different numerators and different denominators. (e.g. by creating common numerators or denominators, 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 visual fraction models.)	**SE:** 259, 309–312, 313–316, 317–320, Reteaching: 324 Sets C, D; 332, 415, 416, 421–424 **TE:** 259–259A, 309A–312B, 313A–316B, 317A–320B, Reteaching: 324 Sets C, D; 332–332A, 415–415A, 416–416C, 421A–424B

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Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	
4.NF.3 Understand a fraction a/b with a >1 as a sum of fractions 1/b.	**SE:** 331, 332, 333–336, 341–344, 345–348, 349–352, 353–356, 369–372, Reteaching: 375–376 Sets A, C, D **TE:** 331–331A, 332–332C, 333A–336B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 369A–372B, Reteaching: 375–376 Sets A, C, D
4.NF.3b Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**SE:** 331, 332, 333–336, 341–344, 345–348, 349–352, 353–356, 369–372, Reteaching: 375–376 Sets A, C, D **TE:** 331–331A, 332–332C, 333A–336B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 369A–372B, Reteaching: 375–376 Sets A, C, D
4.NF.3b 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. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*	**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.3c Add and subtract mixed numbers with like denominators, e.g. by replacing each mixed number with an equivalent fraction (simplest form is not an expectation), 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

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4.NF.3d 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.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	**SE:** 383–384, 385–388, 89–392, 393–396, Reteaching: 407 Sets A, B **TE:** 383–384A, 385A–388B, 389A–392B, 393A–396B, Reteaching: 407 Sets A, B
4.NF.4a Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as 5 copies of ¼ recording the conclusion by the equation 5/4 = 5 x 1/4.	**SE:** 383–384, 385–388, 89–392, 393–396, Reteaching: 407 Sets A, B **TE:** 383–384A, 385A–388B, 389A–392B, 393A–396B, Reteaching: 407 Sets A, B
4.NF.4b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 x 2/5 as 6 x 1/5 recognizing this product as 6/5. (In general, n x a/b = n x a /b.	**SE:** 389–392, 393–396, Reteaching: 407 Sets B, C **TE:** 389A–392B, 393A–396B, Reteaching: 407 Sets B, C

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4.NF.4c 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.) 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?	**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
Understand decimal notation for fractions, and compare decimal fractions. *Note: Limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.*	
4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100 and add 3/10 + 4/100 = 34/100.	**SE:** 443–444, 457–460, Reteaching: 472 Set D **TE:**, 443–444A, 457A–460B, Reteaching: 472 Set D
4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100.	**SE:** 443–444, 445–448, 449–452, Reteaching: 471 Sets A, B **TE:** 443A–444B, 445A–448B, 449A–452B, Reteaching: 471 Sets A, B
4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when two decimals refer to the same whole. Record the results of comparisons with symbols >, <, =, and ≠, 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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4.MD Measurement and Data	
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
4.MD.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. 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 table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …	**SE:** 397–400, 479, 480, 481–484, 485–488, 489–492, 493–496, 497–500, Reteaching: 511 Sets A, B **TE:** 397A–400B, 479–479A, 480-480C, 481A–484B, 485A–488B, 489A–492B, 493A–496B, 497A–500B, Reteaching: 511 Sets A, B
4.MD.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.	**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 **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
4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems explaining and justifying the appropriate unit of measure. 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.	**SE:** 153–156, 168, 479, 501–504, 505–508, Reteaching: 512 Sets C, D; 605–608 **TE:** 153A–156B, 168–168C, 479–479A, 501A–504B, 505A–508B, Reteaching: 512 Sets C, D; 605A–608B

2017 Kansas Mathematics Standards **Grade 4**	**enVision Mathematics, ©2020** **Grade 4**
Represent and interpret data.	
4.MD.4 Make a data display (line plot, bar graph, pictograph) to show a set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in the data display. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	**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
4.G Geometry	
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse, straight, reflex), 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.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse, straight, reflex). Recognize and categorize triangles based on angles (right, acute, obtuse, and equiangular) and/or sides (scalene, isosceles, and equilateral).	**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.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

2017 Kansas Mathematics Standards Grade 5	enVision Mathematics, ©2020 Grade 5
Mathematical Practices	
1. Make sense of problems and persevere in solving them.	**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 SavvasRealize.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. **Student's Edition and Teacher's Edition pages** 25–28, 53–56, 61–64, 65–68, 89–92, 93–96, 97–100, 101–104, 109–112, 113–116, 137–140, 149–152, 153–156, 161–164, 185–188

2017 Kansas Mathematics Standards **Grade 5**	**enVision Mathematics, ©2020** **Grade 5**
2. Reason abstractly and quantitatively.	**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. **Student's Edition and Teacher's Edition pages** 13–16, 45–48, 49–52, 85–88, 105–108, 113–116, 133–136, 157–160, 197–200, 201–204, 205–208, 209–212, 229–232, 233–236, 237–240
3. Construct viable arguments and critique the reasoning of others.	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. **Student's Edition and Teacher's Edition pages** 9–12, 13–16, 21–24, 25–28, 45–48, 49–52, 53–56, 57–60, 65–68, 81–84, 85–88, 89–92, 93–96, 97–100, 109–112

2017 Kansas Mathematics Standards **Grade 5**	**enVision Mathematics, ©2020** **Grade 5**
4. Model with Mathematics.	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. **Student's Edition and Teacher's Edition pages** 5–8, 65–68, 89–92, 93–96, 101–104, 105–108, 109–112, 145–148, 161–164, 185–188, 193–196, 197–200, 241–244, 249–252, 277–280
5. Use appropriate tools strategically.	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. **Student's Edition and Teacher's Edition pages** 5–8, 61–64, 81–84, 149–152, 189–192, 197–200, 237–240, 273–276, 293–296, 301–304, 353–356, 397–400, 401–404, 457–460, 473–476

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6. Attend to precision.	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. **Student's Edition and Teacher's Edition pages** 17–20, 21–24, 29–32, 105–108, 113–116, 133–136, 145–148, 161–164, 181–184, 249–252, 305–308, 309–312, 341–344, 349–352, 361–364
7. Look for and make use of structure.	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. **Student's Edition and Teacher's Edition pages** 5–8, 9–12, 13–16,17–20, 25–28, 29–32, 61–64, 101–104, 129–132, 153–156, 181–184, 201–204, 229–232, 245–248, 297–300

2017 Kansas Mathematics Standards Grade 5	**enVision Mathematics, ©2020 Grade 5**
8. Look for and express regularity in repeated reasoning.	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. **Student's Edition and Teacher's Edition pages** 17–20, 29–32, 57–60, 133–136, 141–144, 145–148, 157–160, 281–284, 289–292, 301–304, 357–360, 413–416, 433–436, 489–492, 493–496
5.OA Operations and Algebraic Thinking	
Write and interpret numerical expressions.	
5.OA.1 Use parentheses in numerical expressions and evaluate expressions with these symbols.	**SE:** 535, 537–540, 541–544, 549–552, Reteaching: 555–556 Sets A, B, D **TE:** 535–535A, 537A–540B, 541A–544B, 549A–552B, Reteaching: 555–556 Sets A, B, D
5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "multiply the sum of 8 and 7 by 2" as $2 \times (8 + 7)$ because parenthetical information must be solved first. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.	**SE:** 535, 536, 41–544, 545–548, Reteaching: 556 Sets C, D **TE:** 535–535A, 536–536C, 541A–544B, 545A–548B, Reteaching: 556 Sets C, D

2017 Kansas Mathematics Standards Grade 5	**enVision Mathematics, ©2020 Grade 5**
5.NBT Number and Operations in Base Ten	
Understand the place value system.	
5.NBT.1 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 1/10 of what it represents in the place to its left.	**SE:** 4, 9–12, 13–16, Reteaching: 35 Sets B, C; 80, 81–84, Reteaching: 119 Set A **TE:** 4–4C, 9A–12B, 13A–16B, Reteaching: 35 Sets B, C; 80–80C, 81A–84B, Reteaching: 119 Set A
5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**SE:** 3, 5–8, Reteaching: 35 Set A; 80, 81–84, Reteaching: 119 Set A; 127–128, 129–132, Reteaching: 167 Set A; 229–232, Reteaching: 255 Set A; 267, 268, 501–504, 505–508, 509–512, Reteaching: 527–528 Sets D–F **TE:** 3–3A, 5A–8B, Reteaching: 35 Set A; 80–80C, 81A–84B, Reteaching: 119 Set A; 127–128A, 129A–132B, Reteaching: 167–168 Set A; 229A–232B, Reteaching: 255–256 Set A; 267–267A, 268-268C, 501A-504B, 505A-508B, 509A-512B, Reteaching: 527-528 Sets D-F
5.NBT.3 Read, write, and compare decimals to thousandths.	**SE:** 3, 4, 13–16, 17–20, 21–24, 29–32, Reteaching: 35–36 Sets C, D, F **TE:** 3-3A, 4-4C, 13A–16B, 17A–20B, 21A–24B, 29A–32B, Reteaching: 35–36 Sets C, D, F
5.NBT.3a Read and write decimals to thousandths using base-ten numerals, number names, expanded form, and unit form (e.g. expanded form 47.392 = 4 x 10 +7 x 1 + 3 x 1/10 + 9 x 1/100 + 2 x 1/1000 unit form 47.392 = 4 tens +7 ones + 9 hundredths + 2 thousandths).	**SE:** 3, 4, 13–16, 17–20, 29–32, Reteaching: 35–36 Sets C, F **TE:** 3-3A, 4-4C, 13A–16B, 17A–20B, 29A–32B, Reteaching: 35–36 Sets C, F
5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, <, =, and ≠ symbols to record the results of comparisons.	**SE:** 4, 21–24, 29–32, Reteaching: 36 Sets D, F **TE:** 4–4C, 21A–24B, 29A–32B, Reteaching: 36 Sets D, F

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5.NBT.4 Use place value understanding to round decimals to any place. (Note: In fifth grade, decimals include whole numbers and decimal fractions to the hundredths place.)	**SE:** 4, 25–28, Reteaching: 36 Set E; 45–48, 49–52, Reteaching: 71 Set B **TE:** 4–4C, 25A–28B, Reteaching: 36 Set E; 45A–48B, 49A–52B, Reteaching: 71 Set B
Perform operations with multi-digit whole numbers and with decimals to hundredths.	
5.NBT.5 Fluently (efficiently, accurately, and flexibly) multiply multi-digit whole numbers using an efficient algorithm. (ex., traditional, partial products, etc.) based on place value understanding and the properties of operations.	**SE:** 80, 85–88, 89–92, 93–96, 97–100, 101–104, 105–108, 109–112, 113–116, Reteaching: 119–120 Sets B–G; 487–488, 489–492, 493–496, 497–500, 513–516, 517–520, 521–524, 527, Reteaching: 528 Sets A-C, G, H **TE:** 80–80C, 85A–88B, 89A–92B, 93A–96B, 97A–100B, 101A–104B, 105A–108B, 109A–112B, 113A–116B, Reteaching: 119–120 Sets B–G; 487–488A, 489A–492B, 493A–496B, 497A–500B, 513A–516B, 517A–520B, 521A–524B, Reteaching: 527–528 Sets A-C, G, H
5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.	**SE:** 179, 181–184, 185–188, 189–192, 193–196, 197–200, 201–204, 205–208, 09–212, Reteaching: 215–218 Sets A–H; 487–488, 489–492, 493–496, 497–500, 513–516 **TE:** 179–179A, 181A–184B, 185A–188B, 189A–192B, 193A–196B, 197A–200B, 201A–204B, 205A–208B, 209A–212B, Reteaching: 215–218 Sets A–H; 487–488A, 489A–492B, 493A–496B, 497A–500B, 513A–516B
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**SE:** 43–44, 45–48, 49–52, 53–56, 57–60, 61–64, 65–68, Reteaching: 71–72 Sets A–E; 79, 81-84, 85-88, 89-92, 93-96, 97-100, 127–128, 129–132, 133–136, 137–140, 141–144, 145–148, 149–152, 153–156, 157–160, 161–164, Reteaching: 167–170 Sets A–F; 227-228, 229–232, 233–236, 237–240, 241–244, 245–248, 248–252, Reteaching: 255–258 Sets A–F; 268

2017 Kansas Mathematics Standards Grade 5	**enVision Mathematics, ©2020 Grade 5**
(Continued) 5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**TE:** 43–44A, 45A–48B, 49A–52B, 53A–56B, 57A–60B, 61A–64B, 65A–68B, Reteaching: 71–72 Sets A–E; 79–79A, 81A-84B, 85A-88B, 89A-92B, 93A-96B, 97A-100B, 127–128A, 129A–132B, 133A–136B, 137A–140B, 141A–144B, 145A–148B, 149A–152B, 153A–156B, 157A–160B, 161A–164B, Reteaching: 167–170 Sets A–F; 229A–232B, 233A–236B, 237A–240B, 241A–244B, 245A–248B, 249A–252B, Reteaching: 255–258 Sets A–F; 268–268C
5.NF Number and Operations – Fractions	
Use equivalent fractions as a strategy to add subtract fractions.	
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = in general, a/b + c/d = ad +bc/bd	**SE:** 268, 269–272, 273–276, 277–280, 281–284, 285–288, 289–292, 293–296, 297–300, 301–304, 305–308, 309–312, Reteaching: 319–322 Sets A–G **TE:** 268–268C, 269A–272B, 272A–276B, 277A–280B, 281A–284B, 285A–288B, 289A–292B, 293A–296B, 297A–300B, 301A–304B, 305A–308B, 309A–312B, Reteaching: 319–322 Sets A–G
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole including cases of unlike denominators. (e.g. by using visual fraction models or equations to represent the problem.) Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7 by observing that 3/7 < 1/2	**SE:** 268, 269–272, 272–276, 277–280, 281–284, 285–288, 289–292, 293–296, 297–300, 301–304, 305–308, 309–312, 313–316, Reteaching: 19–322 Sets A–H; 427–428, 429–432, 433–436, 437–440, 441–444, Reteaching: 448 Sets C, D **TE:** 268–268C, 269A–272B, 272A–276B, 277A–280B, 281A–284B, 285A–288B, 289A–292B, 293A–296B, 297A–300B, 301A–304B, 305A–308B, 309A–312B, Reteaching: 319–322 Sets A–H; 427–428A, 429A–432B, 433A–436B, 437A–440B, 441A–444B, Reteaching: 448 Sets C, D

2017 Kansas Mathematics Standards Grade 5	enVision Mathematics, ©2020 Grade 5
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	
5.NF.3 Interpret a fraction as division of the numerator by the denominator (*a/b* = *a* ÷ *b*). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. e.g. by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?	**SE:** 384, 385–388, 389–392, Reteaching: 419 Set A **TE:** 384–384C, 385A–388B, 389A–392B, Reteaching: 419 Set A
5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	**SE:** 331–332, 333–336, 337–340, 341–344, 345–348, 349–352, Reteaching: 371–372 Sets A–D **TE:** 331–332A, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, Reteaching: 371–372 Sets A–D
5.NF.4a Interpret the product *a/b x q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a x q* ÷ *b*. For example, use a visual fraction model to show 1/2 x 4 = 8/3 and create a story context for this equation. Do the same with 2/3 x 4/5 = 8/15, (In general, a/b x c/d = ac/bd).	**SE:** 331–332, 333–336, 337–340, 341–344, 345–348, 349–352, Reteaching: 371–372 Sets A–D **TE:** 331–332A, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, Reteaching: 371–372 Sets A–D

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5.NF.4b Find the area of a rectangle with fractional side lengths by tiling it with rectangles of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	**SE:** 331–332, 353–356, Reteaching: 372 Set E **TE:** 331–332, 353A–356B, Reteaching: 371–372 Set E
5.NF.5 Interpret multiplication as scaling (resizing), by:	
5.NF.5a Comparing the size of a product to the size of one factor based on the size of the other factor, without performing the indicated multiplication. (e.g. They see (1/2 x 3) as half the size of 3)	**SE:** 331–332, 361–364, Reteaching: 374 Set G **TE:** 331–332, 361A–364B, Reteaching: 374 Set G
5.NF.5b Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = na/nb to the effect of multiplying a/b by 1. . (e.g. Students may have the misconception that multiplication always produces a larger result. They need to have the conceptual understanding with examples like; ¾ x one dozen eggs will have a product that is less than 12)	**SE:** 361–364, Reteaching: 374 Set G **TE:** 361A–364B, Reteaching: 374 Set G
5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, (e.g. by using visual fraction models or equations to represent the problem).	**SE:** 333–336, 337–340, 357–360, 365–368, 371, Reteaching: 373–374 Sets A, B, F, H; 384, 437–440 **TE:** 333A–336B, 337A–340B, 357A–360B, 365A–368B, Reteaching: 373–374 Sets A, B, F, H; 384-384C, 437A–440B

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5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Division of a fraction by a fraction is not a requirement at this grade.	**SE:** 384 **TE:** 384-384C
5.NF.7a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for 1/3 ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 1/3 ÷ 4 = 1/12 because 1/12 x 4 = 1/3.	**SE:**, 383, 393–396, 397–400, 405–408, 409–412, Reteaching: 419–420 Sets C, E **TE:** 383–383A, 393A–396B, 397A–400B, 405A–408B, 413-416, Reteaching: 419–420 Sets C, E
5.NF.7b Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ 1/5, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ 1/5 = 20 because 10 x 1/5 = 4.	**SE:** 383, 393-396, 397-400, 405–408, 409-412, Reteaching: 419–420 Sets B, D **TE:** 383–383A, 393-396, 397-400, 405A–408B, 409-412, Reteaching: 419–420 Sets B, D
5.NF.7c Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, (e.g. by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share ½ lb of chocolate equally? How many 1/3 cup servings are in 2 cups of raisins?).	**SE:** 383, 393–396, 397–400, 401–404, 405–408, 409–412, Reteaching: 419–420 Sets B–D **TE:** 383–383A, 393A–396B, 397A–400B, 401A–404B, 405A–408B, 409A–412B, Reteaching: 419–420 Sets B–D

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5.MD Measurement and Data	
Convert like measurement units within a given measurement system.	
5.MD.1 Convert among different-sized standard measurement units within a given measurement system (e.g. convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	**SE:** 487–488, 489–492, 93–496, 497–500, 501–504, 505–508, 509–512, 513–516, 517–520, 521–524, Reteaching: 527–528 Sets A–H; 536 **TE:** 487–488A, 489A–492B, 493A–496B, 497A–500B, 501A–504B, 505A–508B, 509A–512B, 513A–516B, 517A–520B, 521A–524B, Reteaching: 527–528 Sets A–H; 536–536C
Represent and interpret data.	
5.MD.2 Make a data display (line plot, bar graph, pictograph) to show a data set of measurements in fractions of a unit (1/2, 1/4, 1/8, 1/16). Use operations (add, subtract, multiply) on fractions for this grade to solve problems involving information presented in the data display. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally. After lunch everyone measured how much milk they had left in their containers. Make a line plot showing data to the nearest ¼ cup. Which value has the greatest amount? What is the total?	**SE:** 427–428, 429–432, 433–436, 437–440, 441–444, Reteaching: 447–448 Sets A–C **TE:** 427–428A, 429A–432B, 433A–436B, 437A–440B, 441A-444B, Reteaching: 447–448 Sets A–C
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	
5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	**SE:** 456 **TE:** 456-456C
5.MD.3a A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.	**SE:** 455, 457–460, 473–476, Reteaching: 479 Set A **TE:** 455–455A, 457A–460B, 473A–476B, Reteaching: 479 Set A

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5.MD.3b A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	**SE:** 457–460, 473–476, Reteaching: 479 Set A **TE:** 457A–460B, 473A–476B, Reteaching: 479 Set A
5.MD.4 Measure volume by counting unit cubes, cubic cm, cubic in, cubic ft., and improvised units.	**SE:** 456, 457–460, 461–464, 473–476 **TE:** 456, 457A–460B, 461A–464B, 473A–476B
5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	**SE:** 456, 461-464, Reteaching: 479 Set B **TE:** 456-456C, 461A-464B, Reteaching: 479 Set B
5.MD.5a Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. (e.g. to represent the associative property of multiplication.)	**SE:** 456, 461-464, Reteaching: 479 Set B **TE:** 456-456C, 461A-464B, Reteaching: 479 Set B
5.MD.5c Apply the formulas V = B x h and V = B x h (B represents the area of the base) for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.	**SE:** 455, 461-464, Reteaching: 479 Set B **TE:** 455-455A, 461A-464B, Reteaching: 479 Set B
5.MD.5d Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.	**SE:** 455, 469–472, Reteaching: 480 Sets C, D **TE:** 455-455A, 469A–472B, Reteaching: 480 Sets C, D

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5.G Geometry	
Graph points on the coordinate plane to solve real-world and mathematical problems.	
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the3 convention that the names of the two axes and the coordinates correspond (e.g. x-axis and x-coordinate, y-axis and y-coordinate).	**SE:** 563–564, 565–568, 569–572, 577–580, Reteaching: 583–584 Sets A, B, C **TE:** 563–564A, 565A–568B, 569A–572B, 577A–580B, Reteaching: 583–584 Sets A, B, C
5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (e.g. plotting the relationship between two positive quantities such as maps, coordinate grid games (such as Battleship), time/temperature, time/distance, cost/quantity, etc.).	**SE:** 563–564, 569–572, 573–576, 577–580, Reteaching: 583–584 Sets B, C; 592, 601–604, Reteaching: 612 Set C **TE:** 563–564A, 569A–572B, 573A–576B, 577A–580B, Reteaching: 583–584 Sets B, C; 592–592C, 601A–604B, Reteaching: 612 Set C
Classify two-dimensional figures into categories based on their properties.	
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.	**SE:** 619–620, 621–624, 625–628, 629–632, 633–636, Reteaching: 639–640 Sets A–D **TE:** 619–620A, 621A–624B, 625A–628B, 629A–632B, 633A–636B, 639–Reteaching: 640 Sets A–D
5.G.4 Classify two-dimensional figures in a hierarchy based on properties.	**SE:** 619–620, 621–624, 625–628, 629–632, 633–636, Reteaching: 639–640 Sets B, C, D **TE:** 619–620A, 621A–624B, 625A–628B, 629A–632B, 633A–636B, 639–Reteaching: 640 Sets B, C, D