A Correlation of

enVision® Mathematics

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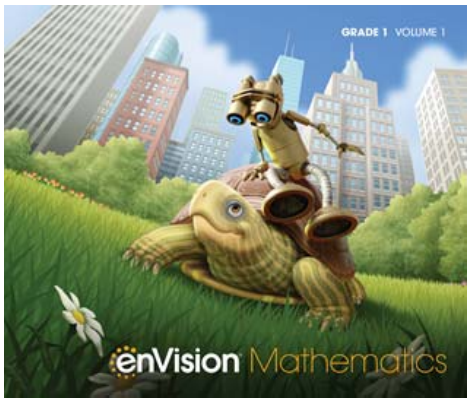

To the

Ohio Learning Standards - Mathematics
Kindergarten – Grade 5

SAVVAS

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To the Ohio Learning Standards - Mathematics

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To the Ohio Learning Standards - Mathematics

Ohio Learning Standards Mathematics Kindergarten	enVision Mathematics, ©2020 Kindergarten
Standards for Mathematical Practice	
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
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

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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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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
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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COUNTING AND CARDINALITY K.CC	
Know number names and the count sequence.	
K.CC.1 Count to 100 by ones and by tens.	**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
K.CC.2 Count forward within 100 beginning from any given number other than 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

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K.CC.3 Write numerals from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	**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, connect counting to cardinality using a variety of objects including pennies.	**SE:** 369–372 **TE:** 369A–372B
a. When counting objects, establish a one-to-one relationship by saying the number names in the standard 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
b. Understand that the last number name said tells the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were 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

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c. 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.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration, given a number from 1-20, 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
Compare numbers.	
K.CC.6 Orally identify (without using inequality symbols) whether the number of objects in one group is greater/more than, less/fewer than, or the same as the number of objects in another group, not to exceed 10 objects in each group.	**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

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K.CC.7 Compare (without using inequality symbols) two numbers between 0 and 10 when 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
OPERATIONS AND ALGEBRAIC THINKING K.OA	
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 such as claps, acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	**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
K.OA.2 Solve addition and subtraction problems (written or oral), and add and subtract within 10 by using objects or drawings to represent the problem.	**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

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K.OA.3 Decompose numbers and record compositions for numbers less than or equal to 10 into pairs in more than one way by using objects and, when appropriate, drawings or equations.	**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
K.OA.4 For any number from 1 to 9, find the number that makes	**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.3: Decompose numbers less than or equal to 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or, when appropriate, an equation.	**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
K.OA.5 Fluently 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

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NUMBER AND OPERATIONS IN BASE TEN K.NBT	
Work with numbers 11–19 to gain foundations for place value.	
K.NBT.1 Compose and decompose numbers from 11 to 19 into a group of ten ones and some further ones by using objects and, when appropriate, drawings or equations, understand that these numbers are composed of a group 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
MEASUREMENT AND DATA K.MD	
Identify, describe, and compare measurable attributes.	
K.MD.1 Identify and describe measurable attributes (length, weight, and height) of a single object using vocabulary terms such as long/short, heavy/light, or tall/short.	**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" or "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. The number of objects in each category should be less than or equal to ten. Counting and sorting coins should be limited to pennies.	**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

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GEOMETRY K.G	
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 name shapes regardless of their orientations 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
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
Describe, compare, create, and compose shapes.	
K.G.4 Describe and compare two- or three-dimensional shapes, in different sizes and orientations, using informal language to describe their commonalities, differences, parts, and other attributes.	**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

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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 Combine simple shapes to form larger shapes.	**SE:** 463–464, 507, 508, 525–528, 533–536 **TE:** 463–464A, 507–507A, 508–508C, 525A–528B, 533A–536B

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Standards for Mathematical Practice	
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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

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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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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
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

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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
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

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OPERATIONS AND ALGEBRAIC THINKING 1.OA	
Represent and solve problems involving addition and subtraction.	
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 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, 233–236, 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, 233A–236B, 261A–264B, 265A–268B, 269A–272B
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. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	**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
Understand and apply properties of operations and the relationship between addition and subtraction.	
1.OA.3 Apply properties of operations as strategies to add and subtract. For example, if 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). 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

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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
Add and subtract within 20.	
1.OA.5 Relate counting to addition and subtraction, e.g., by counting on 2 to add 2.	**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 Set A, E, 211–211A, 213A–216B, 217A–220B, 221A–224B, 251–252A, 253A–256B, 257A–260B**,** 533A–536B, 537A–540B
1.OA.6 Add and subtract within 20, demonstrating fluency with various strategies for addition and subtraction within 10. Strategies may include 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, 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 = 5 + 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 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + = 11, 5 = − 3, 6 + 6 = .	**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
NUMBER AND OPERATIONS IN BASE TEN 1.NBT	
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: 10 can be thought of as a bundle of ten ones — called a "ten," the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones, and 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:** 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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Understand place value.	
1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	**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
Use place value understanding and properties of operations to add and subtract.	
1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Understand that when adding two-digit numbers, tens are added to tens, ones are added to 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 or 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
1.NBT.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (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

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MEASUREMENT AND DATA 1.MD	
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
Work with time and money.	
1.MD.3 Work with time and money.	**SE:** 519, 520, 521-524, 525-528, 529–532, 533–536, 537–540, 541–544, Reteaching 547–548 Sets A–D **TE:** 519-519A, 520–520C, 521A-524B, 525A-528B, 529A–532B, 533A–536B, 537A–540B, 541A–544B, Reteaching 547–548 Sets B–D
a. 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
b. Identify pennies and dimes by name and value.	**SE:** 519, 521-524, 525-528, Reteaching 547 Set A **TE:** 519-519A, 521A-524B, 525A-528B, Reteaching 547 Set A

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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
GEOMETRY 1.G	
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. Describe the whole as two of or four of the shares in real-world contexts. 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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Standards for Mathematical Practice	
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
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

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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
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

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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
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

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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
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

Ohio's Learning Standards Mathematics Grade 2	enVision Mathematics, ©2020 Grade 2
OPERATIONS AND ALGEBRAIC THINKING 2.OA	
Represent and solve problems involving addition and subtraction.	
2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem	**SE:** 4, 37–40, 41–44, Reteaching 50 Sets G, H, 77–80, Reteaching 84 Set D, 92, 113–116, 117–120, Reteaching 123–125 Sets A–F, 136, 141–144, 145–148, 165–168, 169–172, Reteaching 175–178 Sets B, C, G, H, 187, 188, 213–216, 217–220, Reteaching 226 Sets G, H, 236, 245–248, 257–260, 261–264, Reteaching 268–269 Sets C, F, 279, 280, 281–284, 285–288, 289–292, 293–296, 297–300, 309–312, Reteaching 315–318 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, 653–656, 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 Set D, 92–92C, 113A–116B, 117A–120B, Reteaching 123–126 Sets A–F, 136–136A, 141A–144B, 145A–148B, 165A–168B, 169A–172B, Reteaching 175–178 Sets B, C, G, H, 187–187A, 188–188C, 213A–216B, 217A–220B, Reteaching 225–226 Sets G, H, 236–236A, 245A–248B, 257A–260B, 261A–264B, Reteaching 267–270 Sets C, F, 279–279A, 280–280C, 281A–284B, 285A–288B, 289A–292B, 293A–296B, 297A–300B, 309A–312B, Reteaching 315–318 Sets 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, 653A–656B, 657A–660B, 661A–664B, Reteaching 667–670 Sets B, D

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Add and subtract within 20.	
2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. See standard 1.OA.6 for a list of mental strategies.	**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
NUMBER AND OPERATIONS IN BASE TEN 2.NBT	
Understand place value.	
2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones, e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:	**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, L409A–412B, Reteaching 419–422 Sets B, C, G

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a. 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
b. 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.2 Count forward and backward within 1,000 by ones, tens, and hundreds starting at any number, skip-count by 5s starting at any multiple of 5.	**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:** 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
2.NBT.3 Read and write numbers to 1,000 using base-ten numerals, number names, expanded form, and equivalent representations, e.g., 716 is 700 + 10 + 6, or 6 + 700 + 10, or 6 ones and 71 tens, etc.	**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 >, =, and < 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 add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	**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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Use place value understanding and properties of operations to add and subtract.	
2.NBT.7 Add and subtract within 1,000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, hundreds are added or subtracted from hundreds, tens are added or subtracted from tens, ones are added or subtracted from ones, and sometimes it is necessary to compose or decompose tens or 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

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2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. Explanations 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 **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, 201A204B, 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

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MEASUREMENT AND DATA 2.MD	
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 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
2.MD.3 Estimate lengths using 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.	**SE:** 537–540, 541–544, Reteaching 550 Sets G, H, 560 **TE:** 537A–540B, 541A–544B, Reteaching 549–550 Sets G, H, 560–560C
Relate addition and subtraction to length.	
2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same whole number units, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	**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

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2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,..., and represent whole-number sums and differences within 100 on a number line diagram.	**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
Work with time and money.	
2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	**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
2.MD.8 Solve problems with money.	**SE:** 327, 376, 329-332, 333-336, 337-340, 341-344, 345-348 **TE:** 327-327C, 376-376C, 329A-332B, 333A-336B, 337A-340B, 341A-344B, 345A-348B
a. Identify nickels and quarters by name and value.	**SE:** 327, 376, 329-332, 333-336 **TE:** 327-327C, 376-376C, 329A-332B, 333A-336B
b. Find the value of a collection of quarters, dimes, nickels, and pennies.	**SE:** 327, 376, 329-332, 333-336 **TE:** 327-327C, 376-376C, 329A-332B, 333A-336B
c. Solve word problems by adding and subtracting within 100, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbols appropriately (not including decimal notation).	**SE:** 327, 376, 337-340, 341-344, 345-348 **TE:** 327-327C, 376-376C, 337A-340B, 341A-344B, 345A-348B
Represent and interpret data.	
2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit or by making repeated measurements of the same object. Show the measurements by creating 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

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Represent and interpret data.	
2.MD.10 Organize, represent, and interpret data with up to four categories, complete picture graphs when single-unit scales are provided, complete bar graphs when single-unit scales are provided, solve simple put-together, take-apart, and compare problems in a graph.	**SE:** 640, 641–644, 645–648, 649–652, 653–656, 657–660, 661–664, Reteaching 667–670 Sets A–D **TE:** 640–640C, 641A–644B, 645A–648B, 649A–652B, 653A–656B, 657A–660B, 661A–664B, Reteaching 667–670 Sets A–D
GEOMETRY 2.G	
Reason with shapes and their attributes.	
2.G.1 Recognize and identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides or vertices. Recognize and identify cubes, rectangular prisms, cones, and cylinders.	**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
2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	**SE:** 566-580, 589-592, Reteaching 597-598 Sets E, H **TE:** 566A-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*, or *fourths* and *quarters,* and use the phrases *half of, third of,* or *fourth of* and *quarter of.* Describe the whole as two halves, three thirds, or four fourths in real-world contexts. 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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Standards for Mathematical Practice	
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
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

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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
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

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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
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
OPERATIONS AND ALGEBRAIC THINKING 3.OA	
Represent and solve problems involving multiplication and division.	
3.OA.1 Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. (Note: These standards are written with the convention that *a* x *b* means *a* groups of *b* objects each, however, because of the commutative property, students may also interpret 5 x 7 as the total number of objects in 7 groups of 5 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 ÷ 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. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*	**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. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	**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 relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × = 48, 5 = ÷ 3, 6 × 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. *For example, if 6 × 4 = 24 is known, then 4 × 6 = 24 is also known (Commutative Property of Multiplication), 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 (Associative Property of Multiplication), knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 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 multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8, or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers.	**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 **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

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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 the four operations. Represent these problems using equations with a letter or a symbol, which stands 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. Students may use parentheses for clarification since algebraic order of operations is not expected.	**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, 639 **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
Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
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 times 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, 195–198, 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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NUMBER AND OPERATIONS IN BASE TEN 3.NBT	
Use place value understanding and properties of operations to perform multi-digit arithmetic. A range of strategies and algorithms may be used.	
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 add and subtract within 1,000 using strategies and algorithms 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 **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
3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90, e.g., 9 × 80, 5 × 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
NUMBER AND OPERATIONS—FRACTIONS 3.NF	
Develop understanding of fractions as numbers. Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.	
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, 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

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3.NF.2 Understand a fraction as a number on the number line, represent fractions on a number line diagram.	**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
a. 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.	**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
b. Represent a fraction *a*/*b* (which may be greater than 1) on a 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.	**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
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their 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
a. 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

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b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 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
c. 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
d. 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 symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	**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
MEASUREMENT AND DATA 3.MD	
Solve problems involving money, measurement, and estimation of intervals of time, liquid volumes, and masses of objects.	
3.MD.1 Work with time and money.	**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
a. Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes, e.g., by representing the problem on a number line diagram or clock.	**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
b. Solve word problems by adding and subtracting within 1,000, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbol appropriately (not including decimal notation).	This standard is addressed at Grade 2, please see examples below. **SE:** 327, 376, 337-340, 341-344, 345-348 **TE:** 327-327C, 376-376C, 337A-340B, 341A-344B, 345A-348B

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3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply, or divide whole numbers 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 involving notions of "times as much.	**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.3 Create scaled picture graphs to represent a data set with several categories. Create scaled bar graphs to represent a data set with several categories. Solve two-step "how many more" and "how many less" problems using information presented in the scaled graphs. *For example, create a bar graph in which each square in the bar graph might represent 5 pets, then determine how many more/less in two given categories.*	**SE:** 251, 252, 253–256, 257–260, 261–264, 265–268, 269–272, 275–278, 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.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by creating 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
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.	**SE:** 252 **TE:** 252-252C
a. 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.	**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

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b. 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.	**SE:** 209–212, 213–216, 217–220, Reteaching 239–240 Sets A–C, 593–596, Reteaching 604 Set C **TE:** 209A–212B, 213A–216B, Lesson 6-2 217A–220B, Reteaching 239–240 Sets A–C, 593A–596B, Reteaching 604 Set C
3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised 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.7 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
a. 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
b. Multiply side lengths to find areas of rectangles with whole- number side lengths in the 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
c. Use tiling to show in a concrete case that the area of a rectangle with whole number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$ (represent the distributive property with visual models including an area model).	**SE:** 225-228, Reteaching 241 Set E **TE:** 225A-228B, Reteaching 241 Set E
d. Recognize area as additive. Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying 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

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Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
3.MD.8 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 the 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
GEOMETRY 3.G	
Reason with shapes and their attributes.	
3.G.1 Draw and describe triangles, quadrilaterals (rhombuses, rectangles, and squares), and polygons (up to 8 sides) based on the number of sides and the presence or absence of square corners (right angles).	**SE:** 583, 584, 585–588, 589–592, 593–596, 597–600, 603–Reteaching 604 Sets A–D **TE:** 435–436A, 437A–440B, 441A–444B, Reteaching 471–472 Sets A, B, 584–584C, 585A–588B, 589A–592B, Reteaching 603 Sets A, B
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 of the 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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Standards for Mathematical Practice	
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
OPERATIONS AND ALGEBRAIC THINKING 4.OA	
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 × 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
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. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	**SE:** 85–88, 223–224, 260, 225–228, 229–232, 233–236, 237–240, 241–244, 245–248, Reteaching 251–252 Sets A, B, D, H, 481–484, 485–488, 489–492, 493–496, 497–500, 501–504, 505–508, 529–532, 569–572 **TE:** 85A–88B, 223–224A, 260–260C, 225A–228B, 229A–232B, 233A–236B, 237A–240B, 241A–244B, 245A–248B, Reteaching 251–252 Sets A, B, D, H, 481A–484B, 485A–488B, 489A–492B, 493A–496B, 497A–500B, 501A–504B, 505A–508B, 529A–532B, 569A–572B

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4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**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, 115, Reteaching 117–118 Sets B, G, H, 137–140, 141–144, 149–152, 159, 168, 173–176, 177-180, 181-184, 197–120, 205–208 **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, 115, Reteaching 117–118 Sets B, G, H, 137A–140B, 141A–144B, 149A–152B, Reteaching 159–160 Set C, 168–168C, 173A–176B, 177A–180B, 181A–184B, 193A–196B, 197A–120B, 205A–208B
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 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
NUMBER AND OPERATIONS IN BASE TEN 4.NBT	
Generalize place value understanding for multi-digit 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 by applying concepts of place value, multiplication, or division.	**SE:** 4, 9–12, 21–24, Reteaching 27 Set B **TE:** 4–4C, 9A–12B, 21A–24B, Reteaching 27 Set B

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4.NBT.2 Read and write multi-digit whole numbers using standard form, word form, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.	**SE:** 3, 4, 5-8, 13–16, 21–24, Reteaching 27 Sets A, C, Reteaching 27 Set B, 35–36 **TE:** 3–3A, 4–4C, 5A–8B, 13A–16B, 21A–24B, Reteaching 27 Sets A, C, 35–36A
4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place through 1,000,000.	**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 with whole numbers less than or equal to 1,000,000.	
4.NBT.4 Fluently add and subtract multi-digit whole numbers using a standard algorithm.	**SE:** 35–36, 37–40, 41–44, 45–48, 49–52, 53–56, 57–60, 61–64, 65–68, Reteaching 71–72 Sets A–E, 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

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4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**SE:** 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
Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers less than or equal to 1,000,000.	
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

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NUMBER AND OPERATIONS—FRACTIONS 4.NF	
Extend understanding of fraction equivalence and ordering 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 $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**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 denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	**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
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100. (Fractions need not be simplified).	
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
a. 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

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b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *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 and B, 416, 553–556 **TE:** 332-332A, 337A–340B, Reteaching 375 Sets A and B, 416-416C, 553A–556B
c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	**SE:** 331, 332, 57–360, 361–364, 365–368, 369–372, Reteaching 376 Set E, Reteaching 407 Set C, 429–432, 569–572 **TE:** 331-331A, 332-332C, 357A–360B, 361A–364B, 365A–368B, 369A–372B, 376, Reteaching 376 Set E, Reteaching 407 Set C, 429A–432B, 569A–572B
d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	**SE:** 331, 332, 33–336, 341–344, 345–348, 349–352, 353–356, 357–360, 361–364, 365–368, 369–372, Reteaching 376 Set F, 397–400, 401–404, 417–420, 421–424, 425–428, 429–432, Reteaching 435–436 Sets A–D, 481–484, 485–488, 489–492 **TE:** 331–331A, 332–332C, 333A–336B, 341A–344B, 345A–348B, 349A–352B, 353A–356B, 357A–360B, 361A–364B, 365A–368B, 369A–372B, Reteaching 376 Set F, 397A–400B, 401A–404B, 417A–420B, 421A–424B, 425A–428B, 429A–432B, Reteaching 435–436 Sets A–D, 481A–484B, 485A–488B, 489A–492B
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100. (Fractions need not be simplified).	
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

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a. Understand a fraction *a*/*b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4) or 5/4 = (1/4) + (1/4) + (1/4) + (1/4) + (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
b. Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)*	**SE:** 389–392, 393–396, Reteaching 407 Sets B **TE:** 389A–392B, 393A–396B, Reteaching 407 Sets B, C
c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *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 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.* In general, students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators, but addition and subtraction with unlike denominators is not a requirement at this grade.	**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, describe a length as 0.62 meters, locate 0.62 on a number line diagram.*	**SE:** 443–444, 445–448, 449–452, Reteaching 471 Sets A, B **TE:** 443A–444B, 445A–448B, 449A–452B, Reteaching 471 Sets A, B

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4.NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	**SE:** 443–444, 453–456, 65–468, Reteaching 471 Set C, 493–496 **TE:** 443–444A, 453A–456B, 465A–468B, Reteaching 471 Set C, 493A–496B
MEASUREMENT AND DATA 4.MD	
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
4.MD.1 Know relative sizes of the metric measurement units within one system of units. Metric units include kilometer, meter, centimeter, and millimeter, kilogram and gram, and liter and milliliter. Express a larger measurement unit in terms of a smaller unit. Record measurement conversions in a two-column table. *For example, express the length of a 4-meter rope in centimeters. Because 1 meter is 100 times as long as a 1 centimeter, a two-column table of meters and centimeters includes the number pairs 1 and 100, 2 and 200, 3 and 300,…*	**SE:** 493–496, 497–500, Reteaching 511 Sets A, B **TE:** 493A–496B, 497A–500B, Reteaching 511 Sets A, B
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
4.MD.2 Solve real-world problems involving money, time, and metric measurement.	**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
a. Using models, add and subtract money and express the answer in decimal notation.	**SE:** 461-464, 465-468, Reteaching 472 Set E **TE:** 461A-464B, 465A-468B, Reteaching 472 Set E

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b. Using number line diagrams, clocks, or other models, add and subtract intervals of time in hours and minutes.	**SE:** 397-400, 401-404, Reteaching 408 Set D **TE:** 397A-400B, 401A-404B, Reteaching 408 Set D
c. Add, subtract, and multiply whole numbers to solve metric measurement problems involving distances, liquid volumes, and masses of objects.	**SE:** 483-496, 497-500, 501-504, 505-508, Reteaching 511 Set A **TE:** 483A-496B, 497A-500B, 501A-504B, 505A-508B, Reteaching 511 Set A
4.MD.3 Develop efficient strategies to determine the area and perimeter of rectangles in real-world situations and mathematical problems. *For example, given the total area and one side length of a rectangle, solve for the unknown factor, and given two adjacent side lengths of a rectangle, find the perimeter.*	**SE:** 153–156, 168, 479, 501–504, 505–508, Reteaching 512 Sets C, D605–608 **TE:** 153A–156B, 168–168C, 479–479A, 501A–504B, 505A–508B, Reteaching 512 Sets C, D605A–608B
Represent and interpret data.	
4.MD.4 Display and interpret data in graphs (picture graphs, bar graphs, and line plots) to solve problems using numbers and operations for this grade.	**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
Geometric measurement: understand concepts of angle and measure angles.	
4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.	**SE:** 547, 549–552, 553–556, 557–560, 569–572, Reteaching 575 Set B, 589-592 **TE:** 547-547A, 549A–552B, 553A–556B, 557A–560B, 569A–572B, Reteaching 575 Set B, 589A-592B
a. Understand an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.	**SE:** 547, 549–552, 553–556, 557–560, 569–572, Reteaching 575 Set B, 589-592 **TE:** 547, 549A–552B, 553A–556B, 557A–560B, 569A–572B, Reteaching 575 Set B, 589A-592B

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b. Understand an angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	**SE:** 547, 557–560, 561–564, 569–572, Reteaching 576 Set D, 589–592 **TE:** 547, 557A–560B, 561A–564B, 569A–572B, Reteaching 576 Set D, 589A–592B
4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	**SE:** 547, 548, 561–564, 569–572, Reteaching 576 Sets D, F **TE:** 547–547A, 548–548C, 561A–564B, 569A–572B, Reteaching 576 Sets D, F
4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	**SE:** 565–568, 569–572, Reteaching 576 Set E **TE:** 565A–568B, 569A–572B, Reteaching 576 Set E
GEOMETRY 4.G	
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, and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**SE:** 547, 548, 549–552, Reteaching 575 Set A, 583–584, 585–588, 589–592, 593–596, 605–608, Reteaching 611 Set A **TE:** 547–547A, 548–548C, 549A–552B, Reteaching 575 Set A, 583–584A, 585A–588B, 589A–592B, 593A–596B, 605A–608B, Reteaching 611 Set A
4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.	**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 Sets B, C, F

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Standards for Mathematical Practice	
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
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

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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
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

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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
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

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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** 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
OPERATIONS AND ALGEBRAIC THINKING 5.OA	
Write and interpret numerical expressions.	
5.OA.1 Use parentheses in numerical expressions, and evaluate expressions with this symbol. Formal use of algebraic order of operations is not necessary.	**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 "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18,932 + 921) is three times as large as 18,932 + 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

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Analyze patterns and relationships.	
5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*	**SE:** 591, 592, 593–596, 597–600, 601–604, 605–608, Reteaching 611–612 Sets A–D **TE:** 591, 592, 593A–596B, 597A–600B, 601A–604B, 605A–608B, 611–Reteaching 612 Sets A–D
NUMBER AND OPERATIONS IN BASE TEN 5.NBT	
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, 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

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a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).	**SE:** 3, 4, 13–16, 17–20, 29–32, Reteaching 35–36 Sets C, F **TE:** 33, 4, 13A–16B, 17A–20B, 29A–32B, Reteaching 35–36 Sets C, F
b. 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
5.NBT.4 Use place value understanding to round decimals to any place, millions through hundredths.	**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 multiply multi-digit whole numbers using a standard algorithm.	**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, B, 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, B, 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, 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

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Perform operations with multi-digit whole numbers and with decimals to hundredths.	
5.NBT.7 Solve real-world problems by adding, subtracting, multiplying, and dividing decimals using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, or multiplication and division, 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, 229–232, 233–236, 237–240, 241–244, 245–248, 249–252, Reteaching 255–258 Sets A–F, 268 **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
a. Add and subtract decimals, including decimals with whole numbers, (whole numbers through the hundreds place and decimals through the hundredths place).	**SE:** 43–44, 45–48, 49–52, 53–56, 57–60, 61–64, 65–68, Reteaching 71–72 Sets A–E **TE:** 43–44A, 45A–48B, 49A–52B, 53A–56B, 57A–60B, 61A–64B, 65A–68B, Reteaching 71–72 Sets A–E
b. Multiply whole numbers by decimals (whole numbers through the hundreds place and decimals through the hundredths place).	**SE:** 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, **TE:** 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
c. Divide whole numbers by decimals and decimals by whole numbers (whole numbers through the tens place and decimals less than one through the hundredths place using numbers whose division can be readily modeled). *For example, 0.75 divided by 5, 18 divided by 0.6, or 0.9 divided by 3.*	**SE:** 227-228, 229-232, 233-236, 237-240, 241-244, 245-248, 248-252, , Reteaching 255–258 Sets A–F **TE:** 227A-228B, 229A-232B, 233A-236B, 237A-240B, 241A-244B, 245A-248B, 248A-252B, , Reteaching 255–258 Sets A–F

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NUMBER AND OPERATIONS—FRACTIONS 5.NF	
Use equivalent fractions as a strategy to add and subtract fractions. (Fractions need not be simplified).	
5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers and fractions greater than 1) 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, use visual models and properties of operations to show 2/3 + 5/4 = 8/12 + 15/12 = 23/12. In general, a/b + c/d = (a/b x d/d) + (c/d x b/b) = (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
Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified).	
5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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

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Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified).	
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, 37Reteaching 1–372 Sets A–D **TE:** 331–332A, 333A–336B, 337A–340B, 341A–344B, 345A–348B, 349A–352B, Reteaching 371–372 Sets A–D
a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts, equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (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
b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares 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).	**SE:** 331–332, 361–364, Reteaching 374 Set G **TE:** 331–332, 361A–364B, Reteaching 374 Set G
a. Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**SE:** 331–332, 361–364, Reteaching 374 Set G **TE:** 331–332, 361A–364B, Reteaching 374 Set G
b. 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), explaining 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 $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	**SE:** 361–364, Reteaching 374 Set G **TE:** 361A–364B, Reteaching 374 Set G

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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, 57–360, 365–368, 371, Reteaching 373–374 Sets A, B, F, H, 384, 437–440 **TE:** 333A–336B, 337A–340B, 57A–360B, 365A–368B, 371–374, Reteaching 371–374 Sets A, B, F, H, 384-384C, 437A–440B
5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. In general, students able to multiply fractions can develop strategies to divide fractions, by reasoning about the relationship between multiplication and division, but division of a fraction by a fraction is not a requirement at this grade.	**SE:** 384 **TE:** 384-385C
a. 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) × 4 = (1/3).*	**SE:** 383, 401–404, 405–408, 413–416, Reteaching 419–420 Sets C, E **TE:** 383–383A, 401A–404B, 405A–408B, 413A–416B, Reteaching 419–420 Sets C, E
b. 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 20 × (1/5) = 4.*	**SE:** 383, 393–396, 397–400, 405–408, 409–412, Reteaching 419–420 Sets B–D **TE:** 383–383A, 393A–396B, 397A–400B, 405A–408B, 409A–412B, Reteaching 419–420 Sets B–D
c. 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 1/2 pound 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, 9A–412B, Reteaching 419–420 Sets B–D

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MEASUREMENT AND DATA 5.MD	
Convert like measurement units within a given measurement system.	
5.MD.1 Know relative sizes of these U.S. customary measurement units: pounds, ounces, miles, yards, feet, inches, gallons, quarts, pints, cups, fluid ounces, hours, minutes, and seconds. Convert between pounds and ounces, miles and feet, yards, feet, and inches, gallons, quarts, pints, cups, and fluid ounces, hours, minutes, and seconds 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 Display and interpret data in graphs (picture graphs, bar graphs, and line plots) to solve problems using numbers and operations for this grade, e.g., including U.S. customary units in fractions 1/2, 1/4, 1/8, or decimals.	**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:** 455-456C
a. 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
b. 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 volumes by counting unit cubes, using 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

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a. 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. Represent threefold whole-number products as volumes, 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
b. Apply the formulas $V = \ell \times w \times h$ and $V = B \times h$ 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, 461-464, Reteaching 479 Set B **TE:** 455-455A, 461A-464B, Reteaching 479 Set B
c. 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
GEOMETRY 5.G	
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 the 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

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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.	**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 Identify and describe commonalities and differences between types of triangles based on angle measures (equiangular, right, acute, and obtuse triangles) and side lengths (isosceles, equilateral, and scalene triangles).	**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 Identify and describe commonalities and differences between types of quadrilaterals based on angle measures, side lengths, and the presence or absence of parallel and perpendicular lines, e.g., squares, rectangles, parallelograms, trapezoids, and rhombuses.	**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