A Correlation of

Scott Foresman • Addison Wesley

enVisionMATH™

to the

Alabama Course of Study: Mathematics

Grades K - 5

PEARSON

T/M-176

Introduction

This correlation shows the close alignment between **Scott Foresman – Addison Wesley enVisionMATH,** copyright 2011, to the 2009 Alabama Course of Study: Mathematics. Correlation page references are to the Teacher's Edition. Lessons in the Teacher's Edition include facsimile pages of the Student Edition.

The en**Vision**MATH™ program is based around scientific research on how children learn mathematics as well as on classroom-based evidence that validates proven reliability.

Personalized Curriculum
en**Vision**MATH™ provides 20 (16 in Kindergarten) focused topics that are coherent, digestible groups of lessons focusing on one or a few related content areas. A flexible sequence of topics is small enough for a district to rearrange into a personalized curriculum that matches the sequence preferred by the district. The curriculum is designed so that all standards can be taught before the major mathematics testing.

Instructional Design
en**Vision**MATH™ teaches for deep conceptual understanding using research-based best practices. Essential understandings connected by Big Ideas are explicitly stated in the Teacher's Edition. Daily Spiral Review and the Problem of the Day focus foundational skills and allow for ongoing practice with a variety of problem types. Daily interactive concept development encourages students to interact with teachers and other students to develop conceptual understanding.

Visual Learning allows students to benefit from seeing math ideas portrayed pictorially as well as being able to see connections between ideas. en**Vision**MATH™ created a Visual Learning Bridge which is a step-by-step bridge between the interactive learning activity and the lesson exercises to help students focus on one idea at a time and see the connections within the sequence of ideas. The strong sequential visual/verbal connections deepen conceptual understanding for students of all learning modalities and are particularly effective with English language learners and struggling readers. Guiding questions in blue type help the teacher guide students through the examples, ask probing questions to stimulate higher order thinking, and allow for checking of understanding.

Differentiated Instruction
en**Vision**MATH™ engages and interests all students with leveled activities for ongoing differentiated instruction. A Teacher-Directed Intervention activity at the end of every lesson provides immediate opportunities to get students on track. In addition, ready made leveled learning centers for each lesson allow different students to do the same activity at different levels at the same time giving the teacher uninterrupted time to focus on reteaching students who require intervention. All centers can be used repeatedly due to the inclusion of a "Try Again" at the end. They can also be used for ongoing review and they can be used year after year. Topic-specific considerations for EL, Special Education, At-Risk, and Advanced students enable the teacher to accommodate the diverse learners in the classroom.

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to the
Alabama Mathematics Course of Study
Kindergarten

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GRADE K	
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8. Identify two-dimensional (plane) shapes, including rectangle, square, circle, triangle, hexagon, trapezoid, and rhombus, and three-dimensional (solid) figures, including sphere, cone, and cylinder.	**Topic 1:** 1A, 1D, 1F-1G, 3, 4-4C, 5A, 7A, 10-10A, 10C (Reteaching Master), 11A-12C, 13B-14B **Topic 7:** 113A-H, 113-114, 115A-116C, 117A-118C, 119A-120C, 121A-122C, 123A-124C, 131A-132C, 133-134B
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Scott Foresman-Addison Wesley enVisionMATH
to the
Alabama Mathematics Course of Study
Grade 1

Alabama Mathematics Course of Study	Scott Foresman – Addison Wesley enVisionMATH
GRADE 1	
Number and Operations	
Students will:	
1. Demonstrate whole number relationships, including counting forward from a given number to 100 by ones, twos, fives, and tens; counting backwards from a given number; identifying position using ordinal numbers through 10th; and differentiating between odd and even numbers.	**Topic 1:** 3-6B, 7-10B, 11-14B **Topic 5:** 119A-122B, 123A-126B, 127A-130B, 131A-134B, 135A-138B **Topic 10:** 261A-261D, 261, 271A-274B, 275A-278B, 279A-282B, 283A-286B, 287A-290B, 291A-294B, 295A-298B, 299, 299B, 300, 300B (Extension for Lesson 10-2)
• Using vocabulary, including equal, not equal, all, and none, to identify the quantity of sets of objects	**Topic 2:** 29A-29C, 29E, 29G-29H, 29, 31-34B, 35A-38, 43, 47-48 **Topic 3:** 51A-54B, 56-58, 60-62, 63A-66B, 68-70, 76-78 **Topic 4:** 95A-98B, 99A-102B **Topic 12:** 329A-329H, 329-330, 331-334B, 339A-342, 342B, 364 **Topic 17:** 538B (Extension for Lesson 17-4)
2. Demonstrate concepts of number sense of two-digit numbers by composing and decomposing numbers in multiple ways, identifying the value of each digit, determining a number when given the quantity of tens and ones, and determining a number that is 10 more or 10 less than a given number.	**Topic 10:** 264-266B, 267A-270B, 271A-274B **Topic 11:** 301A-301H, 301-302, 303A-306B, 307A-310B, 311A-314B, 315A-318B, 319A-322B, 323-326B **Topic 16:** 497-500B, 501-504B **Topic 20:** 609A-612B, 613A-616B, 617A-620B, 621A-624B, 625A-628B, 629A-632B, 633A-636B, 637A-640B, 642D (Extensions for Lessons 20-2, 20-3, and 20-6)
• Representing numbers with multiple models	This objective is taught, practiced, reviewed, and assessed throughout the *enVision Math* curriculum. Sample references are cited here. **Topic 1:** 3A-6B, 7A-10B, 11A-14B, 15A-18B, 19A-22B, 23A-26B **Topic 10:** 263A-266B, 267A-270B, 271A-274B, 275A-278B, 279A-282B, 283A-286B, 287A-290B, 291A-294B,

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• Estimating the number of objects in sets that contain up to 100 objects	**Topic 11:** 328B (Extension for Lesson 11-3) **Topic 18:** 582B (Extension for Lesson 18-6)
3. Demonstrate addition and subtraction of one- and two-digit numbers by joining, separating, and comparing sets of objects in authentic situations.	**Topic 6:** 141F-141H, 141, 143A-146B, 147, 150-150B, 151B-154B, 155A, 158, 159, 162, 162B, 163A-166B, 167-167C **Topic 7:** 169G-169H, 169, 178, 182, 186, 187A-190B, 191-191C **Topic 16:** 479G-479H, 479, 484, 488-488B, 489, 492, 493A-496B, 500-500B, 501, 504-504B, 508-508A, 513-513C, 514B-514C **Topic 17:** 515C, 515G-515H, 515, 517A, 520, 525A, 528, 532, 533A-536B, 537, 537B-537C **Topic 20:** 607G-607H, 609A, 612, 616, 617A (Daily Spiral Review), 620, 620B, 621A, 624, 625A (Daily Spiral Review), 628, 629A, 632, 633A (Problem of the Day), 636, 637A-640B, 641-641B
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Scott Foresman-Addison Wesley enVisionMATH
to the
Alabama Mathematics Course of Study
Grade 2

Alabama Mathematics Course of Study	Scott Foresman – Addison Wesley enVisionMATH
GRADE 2	
Number and Operations	
Students will:	
1. Demonstrate the concept of number sense by comparing, ordering, and expanding whole numbers up to 1000; determining the place value of a digit in a number through 999; and determining a number when given the value of ones, tens, and hundreds.	**Topic 4:** 97A-97H, 97-98, 99A-102B, 103A-106B, 107A-110B, 111A-114B, 115A-118B, 119A-122B, 123A-126B, 127A-130B, 131A-134B, 135A, 139-140E **Topic 6:** 171A-174B, 175A, 178B, 179A-182B **Topic 7:** 195A-198B **Topic 8:** 217A-217H, 217-218, 219A-222, 223A-226B, 227A-230B, 231A-234B, 235A-238B, 239A-239, 243A-246B, 247-248B **Topic 9:** 249A-249H, 249-250, 251A-254B, 255A-258B, 259A-262B, 263A-266B, 267A-270B, 271A-271, 274B, 275A-278B, 279-280B **Topic 17:** Numbers and Patterns to 1,000: 509A-509H, 509-510, 511A-514B, 515A-518B, 519A-522B, 523A-526B, 527A-530B, 531A-534B, 535A-538B, 539A-542B, 543A-546B, 547-548B
• Identifying a number that is 100 more or 100 less than a given number	**Topic 17:** 523A-526B, 527-530B, 547-547B **Topic 18:** 568-569
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• Comparing numbers using the symbols >, <, and =	**Topic 4:** 97B, 97, 111A-114B, 115A-118B, 119A-122B, 123A-126B, 139-140A **Topic 17:** 509B-509E, 531A-534B, 535A-538B, 539A-542B, 547-548A
• Using estimation to compare sets of objects when the quantity of one set is known	**Topic 4:** 140D (Extensions for Lessons 4-1 and 4-2) **Topic 10:** 287, 299 **Topic 15:** 476B (Extension for Lesson 15-4) **Topic 17:** 548B (Extension for Lesson 17-3) **Topic 18:** 556-558, 587
2. Solve two-digit addition and subtraction problems, with and without regrouping, using multiple strategies.	**Topic 8:** 217A-217H, 217-218, 219A-222, 223A-226B, 227A-230B, 231A-234B, 235A-238B, 239A-242B, 243A-246B, 247-248B **Topic 9:** 249A-249H, 249-250, 251A-254B, 255A-258B, 259A-262B, 263A-266B, 267A-270B, 271A-274B, 275A-278B, 279-280B **Topic 10:** 291A-294B, 295A, 303A-306B, 311-312B
• Solving multistep addition and subtraction problems using authentic situations	**Topic 3:** 91A-94B, 95C **Topic 9:** 275A-278B, 279-279C **Topic 15:** 471A-474B, 475B
• Justifying the strategy used to solve addition and subtraction problems	**Topic 1:** 1A-1H, 1-2, 3A-6B, 7A-10B, 11A-14B, 15A-18B, 19A-22B, 23A-26B, 27A-30B, 31-32 **Topic 2:** 33A-33H, 33-34, 35A-38B, 39A-42B, 43A-46B, 47A-50B, 51A-54B, 55A-58B, 59A-62B, 63A-66B, 67-68 **Topic 3:** 69A-69H, 69-70, 71A-74B, 75A-78B, 79A-82B, 83A-86B, 87A-90B, 91A-94B, 95-96 **Topic 6:** 169A-169H, 169-170, 171A-174B, 175A-178B, 179A-182B, 183A-186B, 187A-190B, 191-192

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Continued	**Topic 7:** 193A-193H, 193-194, 195A-198B, 199A-202B, 203A-206B, 207A-210B, 211A-214B, 215-216 **Topic 8:** 217A-217H, 217-218, 219A-222, 223A-226B, 227A-230B, 231A-234B, 235A-238B, 239A-242B, 243A-246B, 247-248B **Topic 9:** Numbers: 249A-249H, 249-250, 251A-254B, 255A-258B, 259A-262B, 263A-266B, 267A-270B, 271A-274B, 275A-278B, 279-280B **Topic 18:** 549A-549H, 549-550, 551A-554B, 555A-558B, 559A-562B, 563A-566B, 567A-570B, 571A-574B, 575A-578B, 579A-582B, 583A-586B, 587-588
• Using estimation to determine if an answer is reasonable	**Topic 4:** 140D (Extensions for Lessons 4-1 and 4-2) **Topic 10:** 287A-290B, 291A, 299A-302B, 303A (Spiral Review), 307A (Spiral Review), 311-312A **Topic 18:** 555A-558B, 559A, 571A-574B, 575A, 579A, 587-587C
3. Demonstrating computational fluency, including quick recall, of addition and subtraction facts with sums through 20 and differences with minuends through 20	**Topic 1:** 1A-1H, 1-2, 3A-6B, 7A-10B, 11A-14B, 15A-18B, 19A-22B, 23A-26B, 27A-30B, 31-32 **Topic 2:** 33A-33H, 33-34, 35A-38B, 39A-42B, 43A-46B, 47A-50B, 51A-54B, 55A-58B, 59A-62B, 63A-66B, 67-68 **Topic 3:** 69A-69H, 69-70, 71A-74B, 75A-78B, 79A-82B, 83A-86B, 87A-90B, 91A-94B, 95-96 **Topic 6:** 169A-169H, 169-170, 171A-174B, 175A-178B, 179A-182B, 183A-186B, 187A-190B, 191-192 **Topic 7:** 193A-193H, 193-194, 195A-198B, 199A-202B, 203A-206B, 207A-210B, 211A-214B, 215-216
4. Demonstrate conceptual understanding of multiplication and division by solving authentic problems.	**Topic 19:** 589A-589H, 589-590, 591A-594B, 595A-598B, 599A-602B, 603A-606B, 607A-610B, 611A-614B, 615-616 **Topic 20:** 617A-617H, 617-618, 619A-622B, 623A-626B, 627A-630B, 631A-634B, 635A-638B, 639-640B

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5. Illustrate fractions with multiple representations, including manipulatives, drawings, and verbal descriptions.	**Topic 12:** 349A-349H, 349-350, 351A-354B, 355A-358B, 359A-362B, 363A-366B, 367A-370B, 371A-374B, 375-376B
• Recognizing that fractions such as 1/1, 2/2, 3/3, and 4/4 are equivalent to one whole	**Topic 12:** 349E ("Halves"), 350 ("Game"), 351A-354B, 355A
• Using the terms numerator and denominator to label parts of a fraction	**Topic 12:** 349B, 355A-358B, 359A-362B, 367A-370B, 371A-374B, 376D (Extension for Lesson 12-4)
• Recognizing that one-half of an object is not always the same as one-half of a different object	**Topic 12:** 349A, 351A-354B, 355A-358B
6. Determine the monetary value of like and unlike sets of coins and bills up to $2.00.	**Topic 5:** 141A-141H, 141-142, 143A-146B, 147A-150B, 151A-154B, 155A-158B, 159A-162B, 163A-166B, 167-168B
• Identifying sets of coins of equivalent value	**Topic 5:** 141A-141H, 141-142, 143A-146B, 147A-150B, 151A-154B, 155A-158B, 159A-162B, 163A-166B, 167-168B
• Selecting coins to make equivalent sets	**Topic 5:** 141B, 141D, 146-146A, 151A (Problem of the Day), 155A-158B, 159A (Problem of the Day), 163A-166B, 167-168A
• Applying monetary symbols, including dollar ($), cent (¢), and decimal point (.)	**Topic 5:** 141A-141H, 141-142, 143A-146B, 147A-150B, 151A-154B, 155A-158B, 159A-162B, 163A-166B, 167-168B **Topic 12:** 376D (Extension for Lesson 12-5)
• Recognizing decimal numbers .10, .25, .50, and .75 as related to money	**Topic 5:** 159A-162B, 167C-168B **Topic 12:** 376D (Extension for Lesson 12-5)
Algebra	
7. Describe a pattern in a number sequence.	**Topic 4:** 97D, 127A-130B, 131A-134B, 139-140C **Topic 6:** 187A-190B **Topic 17:** 543-546B, 547-547C **Topic 18:** 568-569 **Topic 19:** 589-590 **Topic 20:** 635A-638

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8. Recognize the associative property of addition.	**Topic 2:** 51A-54B, 55A, 63A-66B, 67-68A **Topic 8:** 239A-242B, 247B-247C, 248B-248C
9. Describe change over time in observable (qualitative) and measurable (quantitative) terms.	**Topic 6:** 188-190B, 191-192A **Topic 15:** 450 (Math Project), 476C (Extension for Lesson 15-5) **Topic 16:** 508D (Extension for Lesson 16-1) **Topic 18:** 588B (Extension for Lesson 18-9) **Topic 20:** 638
Geometry	
10. Describe attributes of three-dimensional (solid) figures, including cubes, cylinders, cones, pyramids, spheres, and rectangular prisms according to faces, sides, vertices, surfaces, edges, and angles.	**Topic 11:** 313F, 313G-313H, 313-314, 319A-322B, 343A-346B, 347-348B
• Identifying lines of symmetry in triangles, quadrilaterals, pentagons, hexagons, heptagons, and octagons	**Topic 11:** 313B, 339A-342B, 343A, 347-348A
• Recognizing results of changing the position (transformation) of objects or shapes by sliding (translating), turning (rotating), and flipping (reflecting)	**Topic 11:** 335A-338B, 339A (Problem of the Day), 347-347C
11. Describe the route from one location to another by applying concepts of direction and distance.	Grade 2 students locate and name points on a coordinate grid, and describe paths from the origin to these points. **Topic 16:** 491A-494B, 495A, 507-507B **Topic 17:** 511A (Daily Spiral Review)
• Following multistep directions to locate objects	Grade 2 students locate points and objects on a coordinate grid, noting coordinates and relative location. **Topic 16:** 491A-494B, 495A, 507-507B **Topic 17:** 511A (Daily Spiral Review)

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• Using grids for determining movement between points	Grade 2 students locate and name points on a coordinate grid, and describe paths from the origin to these points. **Topic 16:** 491A-494B, 495A, 507-507B **Topic 17:** 511A (Daily Spiral Review)
Measurement	
12. Measure length in standard units, including inches, feet, and yards.	**Topic 13:** 377A-377H, 377, 391A-394B, 395A, 399A, 407A, 411-412C
• Measuring length using metric units, including centimeter and meter	**Topic 13:** 378, 395A-398B, 403A, 411-412B
• Measuring temperature in degrees Fahrenheit	**Topic 15:** 449B, 467A-470B, 475-476C
• Using measurement tools, including rulers, yardsticks, metersticks, tape measures, or thermometers	**Topic 13:** 377B-377E, 378, 379A-382B, 383A-386B, 387A-390B, 391A-394B, 395A-398B, 403A, 407A, 411-412B **Topic 14:** 413A-413H, 413-414, 415A-418B, 419A-422B, 423A-426B, 427A-430B, 431A-434B, 435A-438B, 439A-442B, 443A-446B, 447-448B **Topic 15:** 449B, 467A-470B, 475-476C
• Estimating length to the nearest unit	**Topic 13:** 377B, 377, 383A-386B, 387A-390B, 391A-394B, 395A-398B, 399A-402B, 403A, 407A, 411-412B
13. Measure weight and volume of familiar objects with nonstandard units.	**Topic 14:** 413A-413H, 413-414, 415A-418B, 419A-422B, 423A-426B, 427A-430B, 431A-434B, 435A-438B, 439A-442B, 443A-446B, 447-448B
• Estimating weight and volume using nonstandard units	**Topic 14:** 413A-413H, 413-414, 415A-418B, 419A-422B, 423A-426B, 427A-430B, 431A-434B, 435A-438B, 439A-442B, 443A-446B, 447-448B
14. Determine time to the minute using digital and analog clocks.	**Topic 15:** 449A-449H, 449-450, 451A-454B, 455A-458B, 459A (Daily Spiral Review), 463A (Daily Spiral Review), 471A (Daily Spiral Review), 474, 475-476B
• Interpreting time to the minute as part of an hour	**Topic 15:** 449A-449H, 449-450, 451A-454B, 455A-458B, 459A-462B, 463A, 471A (Spiral Review), 474, 475-476B

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Data Analysis and Probability	
15. Interpret data using graphs, including bar, line, and circle graphs and Venn diagrams.	**Topic 11:** 348B (Extension for Lesson 11-1) **Topic 16:** 477A-477H, 477-478, 479-482B, 483A-486B, 487A-490B, 491A-494B, 501-502B, 503A-505, 506A-506B, 507-508E
• Using labels and a title to complete a graph	**Topic 16:** 477A-477H, 477-478, 479-482B, 483A-486B, 487A-490B, 501-502B, 503A-505, 506A-506B, 507-508E
16. Determine if one event related to everyday life is more likely or less likely to occur than another event.	**Topic 16:** 477B, 477E, 478, 495A-498B, 499A-502B, 503A, 507-508C

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to the
Alabama Mathematics Course of Study
Grade 3

Alabama Mathematics Course of Study	Scott Foresman – Addison Wesley enVisionMATH
GRADE 3	
Number and Operations	
Students will:	
1. Demonstrate concepts of number sense by comparing, ordering, and expanding whole numbers through 9,999.	**Topic 1:** 2A-2B, 4A-5B, 6A-7B, 8B-9B, 10A (Problem of the Day), 12A-15B, 16A-17B, 18A (Daily Spiral Review), 22A (Daily Spiral Review), 26A, 26-29A **Topic 2:** 43 **Topic 5:** 114A-115B, 124, 131 **Topic 8:** 189 **Topic 9:** 222A-223B **Topic 13:** 315 **Topic 18:** 424
• Comparing numbers using the symbols >, <, =, and ≠	**Topic 1:** 2B, 12A-15B, 16A-17B, 18A (Daily Spiral Review), 22A (Daily Spiral Review), 26, 28-29A **Topic 2:** 43 **Topic 5:** 114A-115B, 124, 131 **Topic 8:** 189 **Topic 9:** 222A-223B **Topic 13:** 315 **Topic 18:** 424
• Determining the place value of a digit in a whole number through 9,999	**Topic 1:** 2A-2H, 2-3, 4A-5B, 6A-7B, 8A-9B, 10A-11B, 12A-15B, 16A-17B, 26A, 26-28 **Topic 2:** 48A-49B, 50A-52B **Topic 13:** 306A-307B **Topic 18:** 412-413 **Topic 19:** 436B-437A
• Writing a four-digit number in words	**Topic 1:** 2A, 2D-2E, 4A-5, 5B, 6A-7B, 8-9B, 10A-11B, 12A (Problem of the Day), 12B, 26-29
• Locating a positive integer through the thousands place and a negative integer between -21 and 0 on a number line	Grade 3 students use a number line to compare and order numbers and to model addition. **Topic 1:** 2B **Topic 2:** 32-33A **Topic 12:** 290A-291, 292-293, 293A-293B, 300-302 **Topic 14:** 332B

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• Converting a number written in expanded notation to standard form	**Topic 1:** 2A, 4A-5B, 6A-7B, 8B-9B, 10A (Problem of the Day), 12A, 16A (Daily Spiral Review), 26A, 26-29A
• Rounding whole numbers to the nearest tens or hundreds place	**Topic 2:** 40A-42, 43A-43B, 44A-46, 47A-47B, 48A, 48, 54, 56A, 56, 60-63A **Topic 3:** 74A-76, 77B, 79 **Topic 6:** 146 (Ex. 29) **Topic 18:** 414A-415B, 419 (Ex. 19), 430-433a **Topic 19:** 438A-439B, 445 (Ex. 15)
2. Solve addition and subtraction problems, including word problems, involving two- and three-digit numbers with and without regrouping.	**Topic 2:** 30B-30C, 30E-30F, 31, 34A-35B, 36A-39B, 40A-43B, 44A-47B, 48A-49B, 50A-53B, 54A-55B, 56A-57B, 58A-59B, 60-62 **Topic 3:** 64B-64C, 64E-64F, 65, 68A-70, 71A-71B, 72A-73B, 74A-77B, 78A-79B, 80-82 **Topic 4:** 84A-84F, 84-85, 86A-87B, 88A-89B, 90A-91B, 92A-95B, 96A-97B, 98A-101B, 102-104
• Estimating sums and differences using multiple methods, including compatible numbers and rounding, to judge the reasonableness of an answer	**Topic 2:** 44A-46, 47A-47B, 48A, 48, 54, 56A, 56, 60-63A **Topic 3:** 74A-76, 77A-77B, 78A-79B, 80-83A
• Demonstrating computational fluency in addition and subtraction of two-digit whole numbers without regrouping	**Topic 2:** 30B-30C, 30E-30F, 31, 34A-35B, 36A-39B, 40A-43B, 44A-47B, 48A-49B, 50A-53B, 54A-55B, 56A-57B, 58A-59B, 60-62 **Topic 3:** 64B-64C, 64E-64F, 65, 68A-70, 71A-71B, 72A-73B, 74A-77B, 78A-79B, 80-83
• Using mental computation strategies to solve addition and subtraction problems of two-digit numbers with and without regrouping	**Topic 2:** 30B-30C, 35, 36A-39B, 60-61A **Topic 3:** 72A-73B, 80-83
• Explaining problems and their solutions using diagrams, numbers, and symbolic expressions	Sample References: **Topic 1:** 14, 20-21, 24A-25B **Topic 2:** 38, 47, 52, 58A-59B **Topic 3:** 70, 77, 78A-79B **Topic 4:** 94, 98A-101B **Topic 5:** 113, 118A-121B, 124, 132A-133B **Topic 6:** 146, 154A-157B **Topic 7:** 169, 174A-177B **Topic 8:** 188, 196A-199B

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Continued	**Topic 9:** 215, 221, 224A-227B **Topic 10:** 237, 240, 252A-253B **Topic 11:** 262, 268A-269B **Topic 12:** 286, 292-293, 298A-299B **Topic 13:** 310-311, 314, 316A-319B, 320A-321B **Topic 14:** 330-331, 336-337, 342A-343B **Topic 15:** 354, 360A-361B **Topic 16:** 374A-375B, 382, 384A-385B **Topic 17:** 394, 404A-405B **Topic 18:** 424, 426A-429B **Topic 19:** 442-443, 448A-451B **Topic 20:** 463, 470-471, 475, 480-481, 482A-483B
3. Demonstrate computational fluency, including quick recall, of multiplication facts through 12 x 12 and division facts with divisors and quotients through 12.	**Topic 5:** 106A-106F, 106-107, 108A-109B, 110A-113B, 114A-115B, 116A-117B, 118A-121B, 122A-125B, 126A-127B, 128A-129B, 130A-131B, 132A-133B, 134-136 **Topic 6:** 138A-138F, 138-139, 140A-141B, 142A-143B, 144A-147B, 148A-149B, 150A-151B, 152A-153B, 154A-157B, 158-160 **Topic 7:** 162A-162F, 162-163, 164A-165B, 166A-169B, 170A-171B, 172A-173B, 174A-177B, 178-180 **Topic 8:** 182A-182F, 182-183, 184A-185B, 186A-189B, 190A-191B, 192A-193B, 194A-195B, 196A-199B, 200-203C
4. Multiply one-, two-, and three-digit multiplicands, with and without regrouping, using single-digit multipliers.	**Topic 5:** 106A-106F, 106-107, 108A-109B, 110A-113B, 114A-115B, 116A-117B, 118A-121B, 122A-125B, 126A-127B, 128A-129B, 130A-131B, 132A-133B, 134-136 **Topic 6:** 138A-138F, 138-139, 140A-141B, 142A-143B, 144A-147B, 148A-149B, 150A-151B, 152A-153B, 154A-157B, 158-160 **Topic 18:** 410A-410F, 410-411, 412A-413B, 414A-415B, 416A-417B, 418A-419B, 420A-421B, 422A-425B, 426A-429B, 430-432

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• Applying concepts of multiplication through the use of manipulatives, number stories, skip-counting arrays, area of a rectangle, or repeated addition	**Topic 5:** 106A-106F, 106-107, 108A-109B, 110A-113B, 114A-115B, 116A-117B, 118A-121B, 122A-125B, 126A-127B, 128A-129B, 130A-131B, 132A-133B, 134-136 **Topic 6:** 138A-138F, 138-139, 140A-141B, 142A-143B, 144A-147B, 148A-149B, 150A-151B, 152A-153B, 154A-157B, 158-160 **Topic 18:** 410A-410F, 410-411, 412A-413B, 414A-415B, 416A-417B, 418A-419B, 420A-421B, 422A-425B, 426A-429B, 430-432
• Applying basic multiplication facts through 9 x 9 using manipulatives, solving problems, and writing number stories	**Topic 5:** 106A-106F, 106-107, 108A-109B, 110A-113B, 114A-115B, 116A-117B, 118A-121B, 122A-125B, 126A-127B, 128A-129B, 130A-131B, 132A-133B, 134-136 **Topic 6:** 138A-138F, 138-139, 140A-141B, 142A-143B, 144A-147B, 148A-149B, 150A-151B, 152A-153B, 154A-157B, 158-160
• Identifying product, multiplier, and multiplicand when given a completed problem	**Topic 5:** 106A-106B, 106E, 107, 108A-109B, 112, 113B, 115, 117B, 122A-125B, 126A-127B, 128A-129B
• Using the terms product or factor to label multiplication problems	**Topic 5:** 106A-106B, 106E, 107, 108A-109B, 112, 113B, 115, 117B, 122A-125B, 126A-127B, 128A-129B **Topic 6:** 140A-141B, 142A-143B, 144A-147B, 148A-149B, 150A-151B, 152A-153B
• Naming the first 10 multiples of each one-digit natural number	**Topic 1:** 15 **Topic 5:** 122A-123, 124, 125B (Intervention), 126A, 127B (Reteaching), 128A, 129 **Topic 9:** 204A-204C, 204, 208A-209B, 210A (Daily Spiral Review), 228, 230
5. Divide whole numbers using two-digit dividends and one-digit divisors.	**Topic 19:** 434A-434F, 434-435, 436A-437B, 438A-439B, 440A-443B, 444A-445B, 446A-447B, 448A-451B, 452-454
• Recognizing division as either repeated subtraction, parts of a set, parts of a whole, or the inverse of multiplication	**Topic 7:** 162A-162F, 162-163, 164A-165B, 166A-169B, 170A-171B, 172A-173B, 174A-177B, 178-181

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• Applying divisibility rules for 2, 5, and 10	Grade 3 students explore fact families involving 2 and 5 as factors. They also explore related multiplication and division facts involving 10 as a factor. **Topic 8:** 182A, 186A-188, 189A-189B, 200-203, 203E
• Recognizing fractions as numerals that may represent division problems	Fractions are used to describe parts of whole objects divided into equal parts and parts of sets divided into equal groups. **Topic 12:** 274A-274F, 274-275, 276A-277B, 278A-279B, 280A-281B, 282A-283B, 284A-287B, 288A-289B, 290A-293B, 294A-295B, 296A-297B, 298A-299B, 300-303C **Topic 13:** 304C, 306A-307B
• Identifying quotient, divisor, and dividend when given a completed problem	**Topic 7:** 162A-162F, 162-163, 164A-165B, 166A-169B, 170A-171B, 172A-173B, 174A-177B, 178-180
• Using the terms quotient, divisor, and dividend to label division problems	**Topic 7:** 162A-162F, 162-163, 164A-165B, 166A-169B, 170A-171B, 172A-173B, 174A-177B, 178-180
6. Demonstrate equivalent fractions using concrete objects or pictorial representations.	**Topic 12:** 274B, 274D, 284A-286, 287A-287B, 298A, 299, 300-303B
• Recognizing pictorial representations of equivalent fractions and decimals in tenths and hundredths	**Topic 13:** 304C, 306A-307B, 322-325
• Recognizing different interpretations of fractions, including parts of a set or a collection, points on a number line, numbers that lie between two consecutive whole numbers, and lengths of segments on a ruler	**Topic 12:** 274A-274F, 274-275, 276A-277B, 278A-279B, 280A-281B, 282A-283B, 284A-287B, 288A-289B, 290A-293B, 294A-295B, 296A-297B, 298A-299B, 300-303C **Topic 13:** 304C, 306A-307B
• Locating proper fractions with common denominators 2 through 10 on a number line with fractional parts of the whole indicated on the number line	**Topic 12:** 290A-291, 292-293, 293A-293B, 300-303C
• Solving problems that involve addition or subtraction of fractions with common denominators	**Topic 12:** 294A-295B, 296A-297B, 300-303C
• Comparing fractions with common denominators using the symbols <, >, and =	**Topic 12:** 274B, 282-283, 288A-289B, 290A-293B, 296A (Daily Spiral Review), 300, 301A, 302, 303B

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7. Use coins to make change up to $1.00.	**Topic 1:** 22A-23B, 27A, 28, 29A (Extension for Lesson 1-8) **Topic 2:** 49 (Ex. 28) **Topic 9:** 221 (Ex. 22) **Topic 13:** 305, 308A, 312, 314, 315B, 322
• Determining the monetary value of a set of unlike coins and bills up to $20	**Topic 1:** 18A-21B, 22A-23B, 24A, 26A, 26-27A, 28-29 **Topic 10:** 240 **Topic 13:** 304B, 304D-304F, 304-305, 307, 308A-311B, 312A-315B, 316-317, 320-321, 322-324
• Rounding money values to the nearest dollar	**Topic 2:** 42 **Topic 18:** 415, 419 **Topic 13:** 307, 319
• Using coins and bills to make change up to $20.00	**Topic 1:** 22A-23B, 27A, 28 **Topic 13:** 305, 308A, 312, 314, 315B, 322
• Using addition and subtraction to find money values up to $20.00	**Topic 1:** 22A-23B **Topic 13:** 304B, 305, 307, 308A-311, 311B, 312A-314, 315A-315B, 316B-319, 320B, 320, 321B, 322-325
Algebra	
8. Complete a given geometric or numeric pattern.	**Topic 1:** 15 **Topic 5:** 122A-123, 124, 125B (Intervention), 126A, 127B (Reteaching), 128A, 129 **Topic 9:** 204A-204C, 204, 208A-209B, 210A (Daily Spiral Review), 212A-213, 214-215, 215A-215B, 218A-219, 220-221, 221A-221B, 228-230 **Topic 10:** 238A (Daily Spiral Review), 247, 252A (Daily Spiral Review) **Topic 12:** 290A (Daily Spiral Review)
• Analyzing patterns on a graph to determine change	**Topic 20:** 466-467B, 468-471B, 484-485A, 486-487, 487D, 487G (Extension for Lesson 20-8)
• Describing mathematical relationships in context	**Topic 9:** 204D, 205, 210B-211B, 212A-213, 214-215, 215A-215B, 216A-217B, 218A-219, 220-221, 221A-B, 227, 228-231A **Topic 12:** 298B-299B, 302, 303A **Topic 17:** 402A (Daily Spiral Review) **Topic 20:** 466-467B, 468-471B, 483 (#14), 484-485A, 486-487, 487D, 487G (Extension for Lesson 20-8)

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9. Recognize commutative, associative, and identity properties of multiplication.	**Topic 5:** 106C, 106E, 107, 110A-112, 113A-113B, 114A, 130A-131B, 134, 135A, 136 **Topic 6:** 138B, 152A-153B, 158-159, 160-161 **Topic 8:** 182B, 194B-195 **Topic 18:** 425
• Using parentheses to signify grouping	**Topic 2:** 30B, 32A-33B, 34A (Problem of the Day), 36A, **Topic 4:** 95 **Topic 6:** 138B, 138D, 152A-153B, 158-159, 160-161 **Topic 16:** 374A (Daily Spiral Review) **Topic 18:** 418, 425
Geometry	
10. Identify geometric representations for points, lines, line segments, parallel and perpendicular lines, angles, and rays.	**Topic 10:** 232B, 233, 242A-243B, 244A-245B, 246A, 248B-249B, 250A-251B, 252B-253, 253B, 254-257A **Topic 11:** 268-269 **Topic 20:** 470 (Ex. 27)
• Recognizing real-life examples of points, lines segments, parallel and perpendicular lines, and angles	**Topic 10:** 232B, 233, 242A-243B, 244A-245B, 246A, 248B-249B, 250A-251B, 252B-253, 253B, 254-257A
• Drawing points, lines, line segments, and parallel and perpendicular lines	**Topic 10:** 232B, 233, 242A-243B, 244A, 245A, 249B (Enrichment), 250B-251B, 252B-253, 253B, 254-257 **Topic 11:** 268-269 **Topic 20:** 470 (Ex. 27)
• Identifying angles as right, obtuse, or acute	**Topic 10:** 244A-245B, 246A, 248B-249B, 250A, 250A-251B, 252-253, 253B, 254-257A **Topic 17:** 405 (Ex. 8)
• Drawing lines of symmetry in triangles, quadrilaterals, pentagons, hexagons, and octagons	**Topic 11:** 258B, 258D, 259, 264A-265B, 266A-267B, 268A-268B, 269A, 270-272 **Topic 20:** 470 (Ex. 28)
11. Specify locations on a coordinate grid by using horizontal and vertical movements.	Grade 3 students locate points on coordinate grids and analyze line graphs. **Topic 20:** 468A-469, 470-471, 471A-471B, 484-487, 487D
• Demonstrating translations, reflections, and rotations using two-dimensional shapes	**Topic 11:** 258B, 258E-258F, 259, 260A-261, 263, 263A-263B, 264A (Problem of the Day), 270-272

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Measurement	
12. Measure length in metric units.	**Topic 15:** 348A-348F, 348-349, 350A-351B, 352A-355B, 360-361, 362-364
• Converting linear measures in meters to centimeters	**Topic 15:** 348A, 350B-351B, 352B-355B, 360A, 360, 362-365A **Topic 17:** 404A (Daily Spiral Review)
• Estimating lengths to the nearest metric unit	**Topic 15:** 348C, 350B-351B, 352A-354, 355A-355B, 362-365
• Measuring weight, mass, volume, and capacity using metric and customary units	**Topic 14:** 326B, 326D-326E, 326-327, 338A-339B, 340A-341B, 344-347A **Topic 15:** 348B-348E, 348-349, 356A-357B, 358A-359B, 362-365A
• Measuring temperature in Celsius	**Topic 17:** 390D, 391, 402B-403B, 407-409
• Relating Celsius temperatures to Fahrenheit temperatures	**Topic 17:** 390D, 391, 402B-403B, 407B-409
• Calculating perimeter and area of rectangular shapes	**Topic 14:** 334A (Problem of the Day) **Topic 16:** 366A-366E, 367, 368A-369B, 370A-371B, 372A-373B, 376A-377B, 378A-379B, 380A (Daily Spiral Review), 383, 384A-385B, 386-389E
13. Determine elapsed time to the day with calendars and to the hour with a clock.	**Topic 17:** 400A-401B, 402A (Problem of the Day), 406-409, 409A (Extensions for Lesson 17-4)
• Calculating elapsed time to the minute within the same hour	Grade 3 students calculate elapsed time to the nearest minute, but over more than one hour. **Topic 17:** 400A-401B, 402A (Problem of the Day), 406-409, 409A (Extension for Lesson 17-4)
Data Analysis and Probability	
14. Recognize data as either categorical or numerical.	**Topic 5:** 121 **Topic 20:** 456A-456F, 456-457, 458A-459B, 460A-463B, 464A-465B, 466A-467B, 468A-471B, 472A, 476A, 478A-481B, 482A-483B, 484-488
• Comparing related data sets from Venn diagrams, bar graphs, line graphs, and line plots	**Topic 5:** 121 **Topic 20:** 456A-456F, 456-457, 458A-459B, 460A-463B, 464A-465B, 466A-467B, 468A-471B, 472A, 476A, 478A-481B, 482A-483B, 484-488

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• Interpreting data from displays, including Venn diagrams, bar graphs, and line plots	**Topic 5:** 121 **Topic 20:** 456A-456F, 456-457, 458A-459B, 460A-463B, 464A-465B, 466A-467B, 468A-471B, 472A, 476A, 478A-481B, 482A-483B, 484-488
• Locating the mode of a data set represented on a bar graph or a line plot	**Topic 20:** 487G (Extension for Lesson 20-8)
15. Determine the likelihood of different outcomes in a simple experiment.	**Topic 20:** 456B, 456D, 472A-475B, 476A-477B, 478A-481B, 484-487G
• Defending predictions of outcomes of simple experiments	**Topic 20:** 456B, 456D, 472A-475B, 476A-477B, 478A-481B, 484-488

Scott Foresman-Addison Wesley enVisionMATH
to the
Alabama Mathematics Course of Study
Grade 4

Alabama Mathematics Course of Study	Scott Foresman – Addison Wesley enVisionMATH
GRADE 4	
Number and Operations	
Students will:	
1. Demonstrate concepts of number sense by comparing and ordering decimals through the hundredths place and whole numbers to 999,999.	**Topic 1:** 2B, 2, 10A-13B, 14A (Daily Spiral Review), 16A (Daily Spiral Review), 18A (Daily Spiral), 20A (Daily Spiral Review), 22-25 **Topic 10:** 237 **Topic 12:** 270A-271, 272, 273A-273B, 274A, 276A, 276-277, 278, 279A-279B, 280A-281B, 282A-283B, 284-287B **Topic 18:** 438A-439B, 443A
• Writing a whole number in expanded notation through the hundred-thousands place	**Topic 1:** 4A-6, 7A-7B, 8A, 8-9, 9B, 23B-25A **Topic 12:** 268A (Daily Spiral Review)
• Writing a number in expanded notation through the hundredths place	**Topic 12:** 266A, 268A, 268-269
• Determining the place value of a digit in a whole number through the hundred-thousands place and in a decimal through the hundredths place	**Topic 1:** 2A-2H, 2-3, 4A-5, 6-7, 7A-7B, 8A-9B, 10A-11, 12-13, 13A-B, 14A-15B, 16A-17B, 22A-24 **Topic 12:** 266A-266B, 268A-269B, 270A-271
2. Write money amounts in words and in dollar-and-cent notation.	**Topic 1:** 2B, 2I, 18A-19B, 20A, 22-25
• Using coins and bills to make change up to $100	**Topic 1:** 2B, 2I, 18A-19B, 20A, 22-25
• Identifying equivalent sums of money	**Topic 1:** 2I, 18A-19B, 20A, 22-25 **Topic 13:** 288C, 296-298, 308B-309B, 310, 312
3. Write improper fractions as mixed numbers and mixed numbers as improper fractions.	**Topic 10:** 214D, 214F, 230A-232, 233A-233B, 234A, 242-243A, 246-247
• Using a number line to compare and order fractions and mixed numbers	**Topic 12:** 276B-278, 279A-279B, 280A-281B, 282A, 284-287, 287A-287B, 287E

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• Simplifying fractions using parallel number lines	Grade 4 students simplify fractions by dividing the numerator and denominator by a common factor. **Topic 10:** 228A-229B, 242-245 **Topic 11:** 249, 250A-253B, 254-255B, 256-257, 258B, 259-261, 261B
• Comparing fractions with uncommon denominators using the symbols <, >, and =	**Topic 10:** 233, 234A-235B, 236A-237B, 238A, 242-243B, 246-247 **Topic 12:** 276A, 276B-278, 279A-279B, 280A-281B, 282A, 284-287, 287A-287B
• Writing equivalent forms of fractions	**Topic 10:** 214B, 214E, 224A-226, 227A-227B, 228A-229B, 235B, 236A-237B, 238A, 241, 241B, 242-245 **Topic 11:** 248E, 248-249, 250A-253B, 254A-255B, 256B-257B, 258A-261B
4. Solve problems, including word problems, involving addition and subtraction of fractions with common denominators.	**Topic 11:** 248A-248F, 248-249, 250A-251, 252-253, 253A-253B, 254A-255B, 256A-257B, 258A-259, 260-261, 262-265
5. Round whole numbers to the nearest ten, hundred, or thousand and decimals to the nearest tenth.	**Topic 2:** 26B, 26D, 32A-33B, 34A, 48-51 **Topic 5:** 94, 100A-101B, 102A-104, 105A-105B, 120-123 **Topic 7:** 140A, 144A-145B, 158-161 **Topic 13:** 288C, 290A-292, 293A-293B, 294A-295B, 300-301, 310-313 **Topic 14:** 316A
6. Solve problems, including word problems, involving addition and subtraction of four-digit numbers with and without regrouping.	**Topic 2:** 26B-26C, 29, 32-33B, 36-39B, 40A, 40-41B, 42-43B, 44A, 48-51
• Estimating sums and differences using various strategies, including rounding and compatible numbers, to judge the reasonableness of an answer	**Topic 2:** 26B, 26D, 32A-33B, 34A, 48-51 **Topic 5:** 106A (Daily Spiral Review) **Topic 13:** 288A, 294A-295B, 300-301, 310-313
• Using addition and subtraction to solve problems with decimals to the hundredths place	**Topic 1:** 18B-19B, 22-25 **Topic 13:** 288B-288D, 296A-298, 299A-299B, 300A-302, 303A-303B, 304A (Problem of the Day), 308B-309B, 310-313

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• Using addition and subtraction to calculate the balance of an account	Grade 4 students add and subtract amounts of money to total costs and to make change. **Topic 1:** 2I, 18A-19B, 20A, 22-25 **Topic 13:** 288C, 296-298, 308B-309B, 310, 312
7. Solve problems, including word problems, involving multiplication and division of whole numbers through two-digit multipliers and one-digit divisors.	**Topic 3:** 52A-52F, 52-53, 54A-55, 56-57, 58A-59B, 60A-61B, 62A-63B, 64A-65B, 66A-67B, 68A-69B, 70-72 **Topic 4:** 74A-74F, 74-75, 76A-77, 78-79, 79A-79B, 80A-81B, 82A-83B, 84A-85B, 86A-87, 88-89, 89A-89B, 90-93C **Topic 5:** 94A-94F, 94-95, 96A-97B, 98A-99B, 100A-101B, 102A-103, 104-105, 105A-105B, 106A-107, 108-109, 109A-109B, 110A-111, 112-113, 113A-113B, 114A-115B, 116A-117, 118-119, 119A-119B, 120-122 **Topic 7:** 140A-140F, 140-141, 142A-143B, 144A-145B, 146A-147, 148-149, 149A-149B, 150A-151B, 152A-153B, 154A-155B, 156A-157B, 158-160 **Topic 8:** 162A-162F, 162-163, 164A-165B, 166A-167B, 168A-169B, 170A-171, 172-173, 173A-173B, 174A-175, 176-177, 177A-177B, 178A-179B, 180A-181B, 182A-183B, 184A-185B, 186A-187B, 188-193C
• Estimating products and quotients of whole numbers using various strategies, including rounding and compatible numbers	**Topic 5:** 100A-101B, 102A-104, 105A-105B, 120-123 **Topic 7:** 140A-140B, 140E, 142A (Daily Spiral Review), 144A-145B, 158-161 **Topic 8:** 162A, 162C, 166A-167B, 188-191, 193A-193B

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• Identifying information needed to determine an operation to solve a problem	Students develop a variety of problem-solving skills and strategies throughout the curriculum. Each topic includes a problem-solving lesson focusing on one of the following: Work Backward; Write an Equation; Make and Test Generalizations; Draw a Picture; Make an Organized List; Make a Table; Make a Graph; Use Objects; Look for a Pattern; Try, Check, and Revise; Use Reasoning; Missing or Extra Information; Two-Question Problems; Multi-Step Problems; or Use a Graph. The problem-solving process is taught in phases: Read and Understand, Plan and Solve, and Look Back and Check. Each lesson in all of the topics includes problem-based instruction through Interactive Learning in the TE. Analyzing a problem situation to determine the operation needed to solve a problem is part of the Read and Understand phase of the problem-solving process. Sample References: **Topic 1:** 20A-21B **Topic 2:** 34A-35B, 39, 44A-46, 47A-47B **Topic 3:** 57, 68A-69B **Topic 4:** 86A-88, 89A-89B **Topic 5:** 102A-104, 105A-105B, 116A-118, 119A-119B **Topic 6:** 134A-135B **Topic 7:** 156A-157B **Topic 8:** 186A-187B **Topic 9:** 208A-209B **Topic 10:** 233, 238A-240, 241A-241B **Topic 11:** 258A-260, 261A-261B **Topic 12:** 282A-283B **Topic 13:** 293, 308A-309B **Topic 14:** 336A-338, 339A-339B **Topic 15:** 356A-357B **Topic 16:** 392A-393B **Topic 17:** 420A-422, 423A-423B

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Continued	**Topic 18:** 440A-441B **Topic 19:** 460A-461B **Topic 20:** 476A-477B
• Demonstrating computational fluency in multiplication and division facts with products through 144 and quotients with dividends through 144 using horizontal and vertical forms	**Topic 3:** 52A-52F, 52-53, 54A-55, 56-57, 58A-59B, 60A-61B, 62A-63B, 64A-65B, 66A-67B, 68A-69B, 70-72 **Topic 4:** 74A-74F, 74-75, 76A-77, 78-79, 79A-79B, 80A-81B, 82A-83B, 84A-85B, 86A-87, 88-89, 89A-89B, 90-93C
• Applying divisibility rules for 3, 4, 6, and 9	**Topic 8:** 193E (Extension for Lesson 8-1) **Topic 10:** 227
• Identifying prime and composite numbers through 50	**Topic 8:** 184A-185B, 188-189B, 192-193B
• Listing all factors of natural numbers through 50	**Topic 8:** 177, 182A-183B, 184A-185B, 188-189B, 192-193B
• Recognizing that some integers can be expressed as a product of factors in more than one way	**Topic 3:** 52E-52F, 53, 60A-61B **Topic 4:** 79 **Topic 8:** 182A-183B, 184A-185B, 188-189B, 192-193B
• Using mental computation strategies to solve multiplication problems with factors that are multiples of 10	**Topic 5:** 94A, 96A-97B, 120-123 **Topic 7:** 150A-151B, 152B, 154A-155B, 158-161 **Topic 8:** 162
• Using mental computation strategies to solve division problems with dividends and divisors that are multiples of 10	**Topic 8:** 162A, 164B-165B, 166A (Problem of the Day), 173, 188-191 **Topic 12:** 279
8. Recognize equivalent forms of fractions and decimals.	**Topic 12:** 266B, 266E, 267, 274A-275B, 276A-277, 278-279, 279A-279B, 280A-281B, 284-287B
Algebra	
9. Write number sentences for word problems that involve multiplication or division.	**Topic 3:** 68A-69B, 70-71 **Topic 4:** 76-77, 80B, 82B, 84B, 85, 86B-88, 89A-89B, 90-93 **Topic 5:** 98B, 106B, 109, 109B, 112, 113, 113B, 114A-114, 115B, 116A-119, 119B, 120, 124 **Topic 6:** 132-133, 135B **Topic 7:** 142B, 146B, 149, 150B, 151, 152B **Topic 8:** 164B-165, 166B, 168B, 169, 170B-172, 174B, 178B-179, 180B-181, 182B-183 **Topic 18:** 436B-437B

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• Applying commutative, associative, and identity properties of multiplication to solve problems	**Topic 3:** 52D-52F, 52-53, 60A-61B, 71A **Topic 4:** 79 **Topic 7:** 155 (Ex. 31) **Topic 9:** 205 (Ex. 23)
• Identifying a rule when given a pattern involving multiplication or division	**Topic 3:** 58B-59, 59B, 60A, 71A-71B **Topic 5:** 108 **Topic 6:** 126D, 127, 128A-129B, 130A-131B, 132A-133B, 136-139 **Topic 14:** 338
10. Complete addition and subtraction number sentences with a missing addend or subtrahend.	**Topic 2:** 31 **Topic 18:** 430C, 430E, 434A-435B, 436A, 438A, 440B, 442-445A
• Applying commutative, associative, and identity properties of addition to solve problems	**Topic 2:** 26A, 28A-30, 31A-31B, 48-49
• Identifying a rule when given a pattern involving addition or subtraction	**Topic 1:** 20-21 **Topic 3:** 58B-59, 59B, 60A, 71A-71B **Topic 6:** 126D, 127, 128A-129B, 130A-131B, 132A-133B, 136-139 **Topic 14:** 336-338, 339A, 342
Geometry	
11. Identify triangles, quadrilaterals, pentagons, hexagons, heptagons, and octagons based on the number of sides, angles, and vertices.	**Topic 9:** 194B-194F, 202A-203B, 204A-205B, 206A-207B, 208A-209B, 210-213A
• Determining results of a reflection, rotation, or translation of a given shape	**Topic 19:** 446B, 446-447, 448A-449B, 450A-451B, 452A-453B, 454A-455B, 456A, 460A-461B, 462-464
• Identifying straight angles	**Topic 9:** 194B, 200A-201B, 208B-209B, 210-213A
• Estimating angle measures using 45°, 90°, 180°, 270°, or 360° as referents	**Topic 9:** 194B, 213A (Extension for Lesson 9-3)
• Identifying figures that have rotational symmetry	**Topic 19:** 446B, 447, 458A-459B, 461, 462-465
• Identifying congruent polygons	**Topic 19:** 446B, 446-447, 448B-449B, 450B-451B, 452B-453B, 454A-455B, 456A (Daily Spiral Review), 462-464
12. Find locations on a map or grid using Quadrant I ordered pairs.	**Topic 17:** 408A-409B, 410A-411B, 424, 426-427, 429B

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• Identifying components of the Cartesian plane, including the x-axis, y-axis, origin, and quadrants	**Topic 17:** 408A-409B, 410A-411B, 424, 426-427
Measurement	
13. Calculate elapsed time in hours and minutes.	**Topic 16:** 362B, 362D, 386A-388, 389, 389A-389B, 390A, 392A (Problem of the Day), 394-399, 399F
14. Measure length, width, weight, mass, volume, and capacity using metric and customary units, and temperature using Celsius and Fahrenheit.	**Topic 12:** 268A (Daily Spiral Review) **Topic 16: Measurement, Time, and Temperature:** 362A-362F, 362-363, 364A-365B, 366A-367B, 368A-369B, 370A-371, 372-373, 373A-373B, 374A-375B, 376A-377B, 378A-379B, 380A-381, 382-383, 383A-383B, 390A-391B, 392A-393B, 394-399F
• Estimating perimeter and area of irregular shapes using unit squares and grid paper	**Topic 14:** 314A-314F, 314-315, 316A-317B, 318A-319B, 320A-321, 322-323, 323A-323B, 324A-325B, 326A-327B, 328A-329, 330-331, 331A-331B, 332A-333B, 334A-335B, 336A-337, 339, 340-343B **Topic 16:** 366A (Problem of the Day)
• Identifying a larger unit of measure equivalent to a smaller unit of measure within the same customary or metric system	**Topic 16:** 364A-365B, 366A-367B, 368A-369B, 370A-371, 372-373, 373A-373B, 374A-375B, 376A-377B, 378A-379B, 380A-381, 382, 383A-383B, 386A, 394-399
Data Analysis and Probability	
15. Represent categorical data using tables and graphs, including bar graphs and line graphs.	**Topic 17:** 400D, 400E, 401, 402B-403B, 404B-405B, 406A-407B, 410A-411B, 415, 417B (Enrichment), 418A-419B, 420A-421, 422-423, 423A-423B, 424-429C
• Collecting data using observations, surveys, or experiments	**Topic 17:** 400D, 401, 402A-403B, 429B (Extension for Lesson 17-1), 429C (Extension for Lesson 17-10)
16. Determine outcomes of simple events as likely, unlikely, certain, equally likely, or impossible.	**Topic 20:** 466A-466F, 466-467, 468A-469B, 470A-471B, 472A-473, 474-475, 475A-475B, 476A-477B, 478-481F
• Verifying predictions by testing possible outcomes of a simple event	**Topic 20:** 466A-466F, 466-467, 468A-469B, 470A-471B, 472A-473, 474-475, 475A-475B, 476A-477B, 478-481F

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17. Represent numerical data using tables and graphs, including bar graphs, line graphs, and line plots.	**Topic 6:** 128B-129B, 130A-131B, 132A-133B **Topic 14:** 336-338, 339A, 342 **Topic 17:** 400D, 400E, 401, 402B-403B, 404B-405B, 406A-407B, 410A-411B, 413B (Reteaching), 415, 417B (Enrichment), 418A-419B, 420A-421, 423, 423A-423B, 424-429C
• Locating the median from graphs or data sets	**Topic 17:** 400B, 400D, 400F, 414A-415B, 416A, 416-417, 417B, 424-425A, 428-429, 429C (Extension for Lesson 17-10)

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to the
Alabama Mathematics Course of Study
Grade 5

Alabama Mathematics Course of Study	Scott Foresman – Addison Wesley enVisionMATH
GRADE 5	
Number and Operations	
Students will:	
1. Demonstrate concepts of number sense by comparing, ordering, rounding, and expanding whole numbers through the millions place and decimals to the thousandths place.	**Topic 1:** 2B, 2D, 2K, 3, 4B-5, 5B, 6A-7, 8-9, 9A-9B, 10A-10B, 10-11, 11B, 12A-13B, 14A, 18-19, 20 **Topic 2:** 27, 30A-31, 32, 33A-33B **Topic 3:** 62A-63B, 64A, 66 **Topic 4:** 85, 86A-87B, 89, 98 **Topic 5:** 124A-125B, 130-131 **Topic 6:** 155, 157 **Topic 7:** 174A-175B **Topic 9:** 238B-239, 241B, 242-243, 243B, 252 **Topic 17:** 412A-413B, 424
• Relating percents to parts out of 100 using equivalent fractions and decimals	**Topic 16:** 394B, 398A-399B, 400A-401B, 402A-403B, 406-409B
• Determining the place value of a digit in a whole number through the millions place and in a decimal through the thousandths place.	**Topic 1:** 2B, 2D-2E, 3, 4B-5B, 6B, 10A-11B, 12A-12B, 18-21 **Topic 9:** 238B-239, 241B, 242-243, 243B, 252
2. Solve problems involving operations on whole numbers, including addition and subtraction of seven-digit numbers, multiplication with two-digit multipliers, and division with two-digit divisors.	Sample References: **Topic 2:** 24A-27B, 30A-33B, 38A-41B, 46A-49B, 50-55 **Topic 3:** 58A-59B, 60A-61B, 62A-63B, 64A-67B, 68A-69B, 70A-71B, 72B-73B, 74A-77B, 78-81 **Topic 4:** 84A-85B, 86A-87B, 88A-89B, 90A-93B, 94A-97B, 98A-101B, 110A-113B, 114-119E **Topic 5:** 122A-123B, 124A-125B, 126A-127B, 128A-129B, 130A-133B, 134A-135B, 136A-137B, 138A-139B, 140-143A
• Estimating products and quotients	**Topic 3:** 56D, 56, 62A-63B, 64A, 66, 78-81 **Topic 4:** 82A, 82E, 85, 86A-87B, 89, 98, 114-119B

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Continued	**Topic 5:** 120B-120C, 120, 124A-125B, 130-131, 140-143A **Topic 6:** 155, 157 **Topic 7:** 174A-175B, 176A, 184A-185B, 186A, 192-197
• Applying divisibility rules of 2, 3, 4, 5, 6, 9, and 10 to problems with dividends of four or more digits	**Topic 4:** 102A-104, 105A-105B, 109, 114-115, 118-119B
• Identifying prime and composite numbers through 100	**Topic 4:** 82B, 102A-104, 105A-105B, 106A-108, 109, 109A-109B, 114-115B **Topic 9:** 232A-233B
• Simplifying expressions with exponents 2 or 3	**Topic 3:** 56B, 72A-73B, 74A, 78-81
• Using mental computation strategies to solve addition or subtraction problems with three-digit numbers	**Topic 2:** 22A-22F, 22-23, 24A-27B, 28A-28B, 30B-32, 33A-33B, 34A-37B, 38A-40, 41A-41B, 50-52
• Using mental computation strategies to solve multiplication problems with three- and one-digit factors or division problems with a three-digit dividend and a one-digit divisor	**Topic 3:** 58A-59B, 60A-61B, 62A-63B, 64A-67B, 68A-69B, 70A-71B, 72B-73B, 74A-77B, 78-81 **Topic 4:** 84A-85B, 86A-87B, 88A-89B, 90A-93B, 94A-97B, 98A-101B, 110A-113B, 114-119E
• Recognizing the correct usage of the order of operations	**Topic 3:** 67 **Topic 6:** 144B, 156A-157B, 158A, 164-165, 166, 167B **Topic 7:** 191 **Topic 9:** 223 **Topic 15:** 385
• Solving word problems involving addition, subtraction, multiplication, and division of whole numbers	Sample References: **Topic 2:** 22A-22F, 22-23, 24A-27B, 28A-28B, 30B-32, 33A-33B, 34A-37B, 38A-40, 41A-41B, 50-52 **Topic 3:** 58A-59B, 60A-61B, 62A-63B, 64A-67B, 68A-69B, 70A-71B, 72B-73B, 74A-77B, 78-81 **Topic 4:** 84A-85B, 86A-87B, 88A-89B, 90A-93B, 94A-97B, 98A-101B, 110A-113B, 114-119E **Topic 5:** 122A-123B, 124A-125B, 126A-127B, 128A-129B, 130A-133B, 134A-135B, 136A-137B, 138A-139B, 140-143A

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3. Solve word problems that involve decimals, fractions, or money.	Sample References: **Topic 2:** 29, 32, 43, 44B, 45, 46B, 47-48 **Topic 7:** 170B, 171, 172B, 173, 174B, 175, 176B, 177, 178B, 179, 180B, 182, 184B, 185, 186B, 187, 188B, 190 **Topic 9:** 220B, 222, 224B, 226B, 229, 230B, 231, 236-237, 238B, 240, 242B, 243, 245, 246-247 **Topic 10:** 256B, 258, 262B, 263, 264B, 265, 266B, 267, 268B, 269 **Topic 11:** 278B, 279, 280B, 282, 284B, 285, 287, 288B, 289
• Demonstrating computational fluency with addition, subtraction, multiplication, and division of decimals	**Topic 2:** 22C, 42A-43B, 44A-45B, 46-47, 49, 49A-49B, 50-54 **Topic 7:** 168A-168F, 168-169, 170A-171B, 172A-173B, 174A-175B, 176A-177B, 178A-179B, 180A-183B, 184A-185B, 186A-187B, 188A-191B, 192-197
• Converting fractions and mixed numbers to decimals and percents	**Topic 9:** 218D, 219, 224-225B, 238A-241B, 242A-243B, 244A-245B, 250-253 **Topic 16:** 394B, 398A-399B, 400A-401B, 402A-403B, 406-407
4. Determine the sum and difference of fractions with common and uncommon denominators.	**Topic 10:** 254A-F, 254-255, 256A-259B, 260A, 262A-263B, 264A-265B, 266A-267B, 268A-269B, 272-275A
• Solving word problems involving addition and subtraction of fractions with common and uncommon denominators	**Topic 10:** 256B, 258, 259B, 262B, 263, 263B, 264B, 265, 265B, 266B, 267, 267B, 268B, 269, 269B, 272-273B
• Using least common multiple (LCM) to find common denominators	**Topic 10:** 254B, 254E, 255, 260A-261B, 262A, 272, 274
• Determining greatest common factor (GCF) to simplify fractions	**Topic 9:** 232A-233B, 234A, 234-235, 248-250 **Topic 10:** 254
• Estimating sums and differences of fractions	**Topic 10:** 266-267, 268-269, 275A (Extension for Lesson 10-1)
• Solving problems involving multiplication and division of fractions	**Topic 11:** 276A-276F, 278A-279B, 280A-283B, 284A-285B, 286A-287B, 288A-289B, 290-293

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5. Identify numbers less than zero by extending the number line.	**Topic 17:** 412B-413, 413B, 417, 418B-419B, 424-425, 426-427
• Locating fractions and decimals less than zero on a number line	Grade 5 students graph positive and negative integers and positive fractions and decimals on a number line. **Topic 17:** 412B-413, 413B, 417, 418B-419B, 424-425, 426-427 **Topic 9:** 218D, 219, 224-225B, 238A-241B242A-243B, 244A-245B, 250-253
Algebra	
6. Demonstrate the commutative, associative, and identity properties of addition and multiplication of whole numbers.	**Topic 2:** 22A, 22E, 24A-25, 27A-27B, 50, 52 **Topic 3:** 56A, 58A-59B, 60A, 60, 80 **Topic 9:** 223
• Recognizing the distributive property of multiplication over addition	**Topic 6:** 144B, 156A-157B, 158A, 164, 166 **Topic 9:** 223
7. Write a number sentence for a problem expressed in words.	**Topic 6:** 148A-151B, 152B **Topic 15:** 374A-374F, 374-375, 376A-377B, 378A-379B, 380A-381B, 382A-383, 384, 385A-385B, 386A-389B, 390-393B **Topic 16:** 404A-405B, 406-407B **Topic 17:** 410B, 420A-421B, 422A
• Expressing unknowns in equations using variables	**Topic 6:** 148A-151B, 152B **Topic 15:** 374A-374F, 374-375, 376A-377B, 378A-379B, 380A-381B, 382A-383, 384, 385A-385B, 386A-389B, 390-393B **Topic 16:** 404A-405B, 406-407B **Topic 17:** 410B, 420A-421B, 422A
• Justifying a rule when given a pattern involving addition, subtraction, multiplication, or division	**Topic 1:** 14A-15B **Topic 2:** 33 **Topic 3:** 77 **Topic 6:** 148A-151B, 152B **Topic 15:** 382A-383, 384, 385A-385B, 386A, 390-392 **Topic 16:** 404A-405B, 406-407B
Geometry	
8. Identify regular polygons and congruent polygons.	**Topic 8:** 198B, 199, 206A-207B, 208A-208, 210B-211, 214-216 **Topic 13:** 325 **Topic 19:** 465, 469, 470-471, 472A-473B, 474A, 477, 480-483

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• Classifying triangles as equilateral, isosceles, or scalene	**Topic 8:** 198B, 199, 208A-209B, 210A, 214-217B **Topic 13:** 325
• Identifying line and rotational symmetries of polygons	**Topic 19:** 474A-476, 477A-477B, 478A, 480-483
• Solving for a missing side of similar polygons given proportional dimensions	**Topic 8:** 217F (Extension for Lesson 8-5) **Topic 12:** 314-315, 315B (Enrichment) **Topic 19:** 483B (Extension for Lesson 19-4)
• Identifying a three-dimensional object from a two-dimensional representation of that object	**Topic 13:** 320A-320F, 320-321, 322A-323, 324, 325A-325B, 326A-327B, 328A-329B, 330A-331B, 332A-335B, 336A-339B, 340A-341B, 342-344
• Identifying a two-dimensional representation of a three-dimensional object	**Topic 12:** 300A (Daily Spiral Review) **Topic 13:** 320A-320F, 320-321, 322A-324, 325A-325B, 326A-327B, 328A-329B, 330A-331B, 332A-335B, 336A-339B, 340A-341B, 342-344
9. Construct components of the Cartesian plane, including the x-axis, y-axis, origin, and quadrants.	**Topic 17:** 410B, 410E, 411, 414A-416, 417A-417B, 418A, 418-419B, 420A-421B, 422A, 424-427
• Locating ordered pairs on the Cartesian plane	**Topic 17:** 410B, 410E, 411, 414A-416, 417A-417B, 418A, 418-419B, 420A-421B, 422A, 424-427
10. Identify the center, radius, and diameter of a circle.	**Topic 12:** 294B, 310A-313B, 314A, 316-319B, 319E **Topic 19:** 483A (Extension for Lesson 19-3)
• Identifying a chord and an arc of a circle	**Topic 12:** 294B, 310A-313B, 314A, 316-319B, 319E
Measurement	
11. Estimate perimeter and area of irregular shapes using unit squares and grid paper.	**Topic 12:** 294A-F, 295, 300A-302, 303A-303B, 304A-305B, 306A-307B, 308A-309B, 314B-315B, 316-319B **Topic 17:** 427A (Extension for Lesson 17-3)
12. Calculate the perimeter of rectangles from measured dimensions.	**Topic 12:** 294A, 294C-294D, 295, 300A-302, 303A-303B, 304A, 314B-315B, 316-319B **Topic 17:** 427A (Extension for Lesson 17-3)

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• Determining surface areas of rectangular solids	**Topic 13:** 320B, 320D, 320F, 328A-329B, 330A, 335B, 341B (Enrichment), 342-345
• Determining the perimeter of triangles and parallelograms	**Topic 12:** 294A, 294C-294D, 295, 300A-302, 303A-303B, 304A, 314B-315B, 316-319B
• Determining how perimeter or area of a rectangle is affected when either is held constant and the other is changed	**Topic 12:** 294A, 294D, 314A-315B, 316-319 **Topic 17:** 427A (Extension for Lesson 17-3)
13. Convert a larger unit of measurement to a smaller unit of measurement within the same customary or metric system.	**Topic 14:** 348-349, 349B, 350-351, 351B, 352-353, 353B, 354A-355B, 356A-357B, 358A, 370
• Solving multistep word problems involving elapsed time	**Topic 14:** 346B, 346F, 358A-360, 361, 361A-361B, 362A-363B, 364A (Daily Spiral Review), 366B-366, 368-369B, 372-373A
Data Analysis and Probability	
14. Analyze data collected from a survey or experiment to determine results and factors that affect results.	**Topic 18:** 428D, 430A-431B, 435B, 456-461A **Topic 20:** 484A-484F, 485, 488A-491B, 492A-493B, 494B-495B, 496-499F
• Identifying the type of graph, including stem-and-leaf plot, line plot, bar graph, line graph, and Venn diagram, that most accurately represents given data	**Topic 8:** 198B, 217F (Extension for Lesson 8-5) **Topic 9:** 233 **Topic 18:** 428B-428C, 428E-428F, 429, 430A-431B, 432A-435B, 436A-439B, 440A-443B, 444A-445B, 446A-449B, 450A, 454A-455B, 456-459
• Determining the measures of central tendency to analyze data	**Topic 18:** 428B-428C, 428E, 450A-451B, 452A, 456-461B
• Determining the range of a given data set	**Topic 18:** 428B, 452A-453B, 456-461
15. Use fractions to represent the probability of events that are neither certain nor impossible.	**Topic 20:** 484A-484F, 485, 488A-491B, 492A-493B, 496-499F
• Solving word problems involving probability	**Topic 20:** 484A-484F, 485, 488A-491B, 492A-493B, 496-499F
• Identifying the probability of an event that is certain as 1 or impossible as 0	**Topic 20:** 484A-484F, 485, 488A-491B, 492A-493B, 496-499F