

A Correlation of



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to the

**New York
Mathematics Core
Curriculum
Grades K-6**



O/M-148

Introduction

This document demonstrates the high degree of success students will achieve when using **Scott Foresman – Addison Wesley Mathematics** in meeting the objectives of the New York Mathematics Core Curriculum. Correlation page references are to the Teacher Edition which contains facsimile Pupil Edition pages.

Scott Foresman – Addison Wesley Mathematics was carefully developed to reflect the specific needs of students and teachers at every grade level, while maintaining an overall primary goal: to have math make sense from every perspective. This program is based on scientific research that describes how children learn mathematics well and on classroom-based evidence that validates proven reliability.

● **Reaching All Learners**

Scott Foresman – Addison Wesley Mathematics addresses the needs of every student through structured instruction that makes concepts easier for students to grasp. Lessons provide step-by-step examples that show students how to think about and solve the problem. Built-in leveled practice in every lesson allows the teacher to customize instruction to match students' abilities. Reaching All Learners, featured in the Teacher Edition, helps teachers meet the diverse needs of the classroom with fun and stimulating activities that are easy to incorporate directly into the lesson plan.

● **Test Prep**

Scott Foresman - Addison Wesley Mathematics builds understanding through connections to prior knowledge, math strands, other subjects and the real world. It provides practice for maximum results and offers assessment in a variety of ways. Besides carefully placed reviews at the end of each Section, an important Test Prep strand runs throughout the program. Writing exercises prepare students for open-ended and short-or extended-response questions on state and national tests. Spiral review in a test format help students keep their test-taking skills sharp.

● **Priority on problem solving:**

Problem-solving instruction is systematic and explicit. Reading connections help children with problem-solving skills and strategies for math. Reading for Math Success encourages students to use the reading skills and strategies they already know to solve math problems.

● **Instructional Support**

In the Teacher Edition, the Lesson Planner provides an easy, at-a-glance planning tool. It identifies objectives, math understandings, focus questions, vocabulary, and resources for each lesson in the chapter. Professional Development at the beginning of each chapter in the Teacher Edition includes a Skills Trace as well as Math Background and Teaching Tips for each section in the chapter.

Ancillaries help to reach all learners with practice, problem solving, hands-on math, language support, assessment and teacher support. Technology resources for both the student and the teacher provide a whole new dimension to math instruction by helping to create motivating and engaging lessons.

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**Scott Foresman – Addison Wesley Mathematics
to the
New York Mathematics Core Curriculum**

Kindergarten

Key Idea 1: Mathematical Reasoning

Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

1A. Use models, facts, and relationships to draw conclusions about mathematics and explain their reasoning.

K: 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 69A-69B, 69-70, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 93A-93B, 93-94, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112, 215A-215B, 215-216, 289A-289B, 289-290

1B. Use patterns and relationships to analyze mathematical situations.

K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 95-96, 293A-293B, 293-294, 295A-295B, 295-296, 297-298

1C. Explain their answers and solution processes.

K: 19A-19B, 19-20, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 143A-143B, 143-144, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 279A-279B, 279-280, 297A-297B, 297-298

Key Idea 2: Number and Numeration

Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

2A. Use whole numbers to determine number positions and quantify groups of objects.

K: 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 69A-69B, 69-70, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 93A-93B, 93-94, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112

2B. Use concrete materials to model numbers and number relationships for whole numbers and fractions.

K: 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 69A-69B, 69-70, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 93A-93B, 93-94, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112, 215A-215B, 215-216, 289A-289B, 289-290

2C. Relate counting to grouping and place value.

K: 53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104, 115A-115B, 115-116, 287A-287B, 287-288, 291A-291B, 291-292, 293A-293B, 293-294, 295A-295B, 295-296

2D. Recognize the order of whole numbers.

K: 63A-63B, 63-64, 65A-65B, 65-66, 87A-87B, 87-88, 89A-89B, 89-90, 91A-91B, 91-92, 121A-121B, 121-122

Key Idea 3: Operations

Students use mathematical operations and relationships among them to understand mathematics.

3A. Develop strategies for selecting the appropriate computational and operational methods in problem solving.

K: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

3B. Develop readiness for single-digit addition and subtraction facts.

K: 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 235A-235B, 235-236, 237A-237B, 237-238, 245A-245B, 245-246, 247A-247B, 247-248, 265A-265B, 265-266, 267A-267B, 267-268, 269A-269B, 269-270

3C. Understand the commutative and associative properties.

K: 251A-251B, 251-253, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

Key Idea 4: Modeling/Multiple Representation

Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

4A. Use concrete materials to model spatial relationships.

K: 3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9A-9B, 9-10, 199A-199B, 199-200, 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202, 203A-203B, 203-204, 205A-205B, 205-206

4B. Construct charts and graphs to display and analyze real-world data.

K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

4C. Use multiple representations (manipulative materials, pictures, diagrams) as tools to explain the operation of everyday procedures.

K: 27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 77-78, 79-80, 83-84, 103-104, 125-126, 217-218, 247-248, 267-268, 291-292

4D. Use physical materials, pictures, and diagrams to explain mathematical ideas and processes and to demonstrate geometric concepts.

K: 27-28, 29-30, 31-32, 33-34, 53-54, 57-58, 77-78, 79-80, 83-84, 103-104, 125-126, 199A-199B, 199-200, 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202, 203A-203B, 203-204, 205A-205B, 205-206, 217-218, 247-248, 267-268, 291-292

Key Idea 5: Measurement

Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

5A. Select appropriate standard and nonstandard measurement tools in measurement activities.

K: 139A-139B, 139-140, 141A-141B, 141-142, 147A-147B, 147-148, 151A-151B, 151-152

5B. Understand the attributes of length, capacity, weight, time, money, and temperature.

K: 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 151A-151B, 151-152, 153A-153B, 153-154

5C. Estimate measures such as length and volume, using both standard and nonstandard units.

K: 141A-141B, 141-142, 147A-147B, 147-148, 151A-151B, 151-152

5D. Collect and display data.

K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

5E. Use statistical methods such as graphs and charts to interpret data.

K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

Key Idea 6: Uncertainty

Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

6A. Recognize situations in which only an estimate is required.

K: 141A-141B, 141-142, 147A-147B, 147-148, 151A-151B, 151-152

6B. Develop a variety of estimation skills and strategies.

K: 119A-119B, 119-120, 141A-141B, 141-142, 147A-147B, 147-148, 151A-151B, 151-152

6C. Predict experimental probabilities.

K: Preparation: 213A-213B, 213-214, 215A-215B, 215-216

Key Idea 7: Patterns/Functions

Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.

7A. Recognize, describe, extend, and create a wide variety of patterns.

K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 95-96, 293A-293B, 293-294, 295A-295B, 295-296, 297-298

7B. Represent and describe mathematical relationships.

K: Preparation: 293A-293B, 293-294, 295A-295B, 295-296

7C. Use a variety of manipulative materials to explore patterns.

K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 95-96, 293A-293B, 293-294, 295A-295B, 295-296, 297-298

7D. Interpret graphs.

K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34

7E. Explore and develop relationships among two- and three-dimensional geometric shapes.

K: 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202, 203A-203B, 203-204, 205A-205B, 205-206

7F. Discover patterns in nature, art, music, and literature.

K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46

**Scott Foresman – Addison Wesley Mathematics
to the
New York Mathematics Core Curriculum**

Grades 1 - 2

Key Idea 1: Mathematical Reasoning

Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

1A. Use models, facts, and relationships to draw conclusions about mathematics and explain their reasoning.

1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 241A-241B, 241-242, 267A-267B, 267-268

2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104

1B. Use patterns and relationships to analyze mathematical situations.

1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262

2: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

1C. Justify their answers and solution processes.

1: 22, 34, 46, 66, 80, 114, 117, 138, 146, 149, 178, 188, 194, 220, 230, 252, 270, 272, 273, 294, 310, 314, 320, 323, 328B, 340, 354, 356, 368, 382, 406, 409, 414B, 426, 434, 448, 451, 470, 482, 484, 489, 492B

2: 8, 16, 20, 24, 35, 48, 56, 64, 73, 78B, 94, 98, 106, 107, 110, 124, 148, 152, 164, 167, 172B, 176, 196, 200, 202, 203, 224, 232, 236, 238, 239, 244B, 254, 266, 268, 280, 282, 283, 296, 308, 316, 318, 322, 326, 332, 333, 338B, 348, 354, 362, 370, 372, 380, 382, 383, 404, 410, 416, 418, 419, 424B, 440, 442, 454, 456, 458, 459, 468, 486, 492, 493, 498B

1D. Use logical reasoning to reach simple conclusions.

1: 7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 191A-191B, 191-192, 215A-215B, 215-216, 223A-223B, 223-224, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 317A-317B, 317-318, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 445A-445B, 445-446, 467A-467B, 467-468, 481A-481B, 481-482

2: 9A-9B, 9-10, 19A-19B, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 189A-189B, 189-190, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 251A-251B, 251-252, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 405A-405B, 405-406, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

Key Idea 2: Number and Numeration

Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

2A. Use whole numbers and fractions to identify locations, quantify groups of objects, and measure distances.

1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 181A-181B, 181-182, 183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 241A-241B, 241-242, 267A-267B, 267-268

2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104, 269A-269B, 269-270, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

2B. Use concrete materials to model numbers and number relationships for whole numbers and fractions including decimal fractions.

1: 11-12, 13-14, 15-16, 17-18, 25-26, 27-28, 47-48, 63-64, 75-76, 97-98, 125-126, 245-246, 291-292, 309-310, 311-312, 313-314, 431-432, 481-482

2: 67A-67B, 67-68, 81A-81B, 81-82, 99A-99B, 99-100, 115A-115B, 115-116, 189A-189B, 189-190, 251A-251B, 251-252, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316, 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 439A-439B, 439-440, 479A-479B, 479-480

2C. Relate counting to grouping and place value.

1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 281A-281B, 281-282, 283A-283B, 283-284, 285A-285B, 285-286, 287A-287B, 287-288

2: 3A-3B, 3-4, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86

2D. Recognize the order of whole numbers and commonly used fractions.

1: 29A-29B, 29-30, 31A-31B, 31-32, 297A-297B, 297-298, 301A-301B, 301-302

2: 15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410

2E. Demonstrate the concept of ratio through problems related to actual situations.

- 1: preparation: 181A-181B, 181-182, 183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190
- 2: preparation: 269A-269B, 269-270, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278

Key Idea 3: Operations

Students use mathematical operations and relationships among them to understand mathematics.

3A. Add and subtract whole numbers.

- 1: 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440
- 2: 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194

3B. Develop strategies for selecting the appropriate computational and operational method in problem solving.

- 1: 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440; 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478
- 2: 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194

3C. Know single-digit addition and subtraction facts and develop readiness for multiplication and division facts.

- 1: 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440

2: 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66

3D. Understand the commutative and associative properties.

1: 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 129A-129B, 129-130, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142

2: 5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 57A-57B, 57-58

Key Idea 4: Modeling/Multiple Representation

Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

4A. Use concrete materials to model spatial relationships.

1: 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 165A-165B, 165-166, 167A-167B, 167-168, 169A-169B, 169-170

2: 247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 259-260

4B. Construct charts and graphs to display and analyze real-world data.

1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

2: 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

4C. Use multiple representations (manipulative materials, pictures, diagrams) as tools to explain the operation of everyday procedures.

1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 241A-241B, 241-242, 267A-267B, 267-268

2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104

4D. Use variables such as height, weight, and hand size to predict changes over time.

1: related material: 309A-039B, 309-310, 311A-311B, 311-312

2: related material: 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324

4E. Use physical materials, pictures, and diagrams to explain mathematical ideas and processes and to demonstrate geometric concepts.

- 1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 165A-165B, 165-166, 167A-167B, 167-168, 169A-169B, 169-170, 241A-241B, 241-242, 267A-267B, 267-268
- 2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104, 247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 259-260

Key Idea 5: Measurement

Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

5A. Understand that measurement is approximate, never exact.

- 1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390
- 2: 297A-279B, 297-298, 341A-341B, 341-342

5B. Select appropriate standard and nonstandard measurement tools in measurement activities.

- 1: 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 385A-385B, 385-386, 387A-387B, 387-388, 389A-389B, 389-390, 391A-391B, 391-392, 393A-393B, 393-394, 397A-397B, 397-398
- 2: 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370

5C. Understand the attributes of area, length, capacity, volume, weight, time, temperature and money.

- 1: 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 385A-385B, 385-386, 387A-387B, 387-388, 389A-389B, 389-390, 391A-391B, 391-392, 393A-393B, 393-394, 397A-397B, 397-398
- 2: 109A-109B, 109-110, 111A-111B, 111-112, 113A-113B, 113-114, 115A-115B, 115-116, 117A-117B, 117-118, 119A-119B, 119-120, 121A-121B, 121-122, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370

5D. Estimate measures such as length, perimeter, area, and volume, using both standard and nonstandard units.

- 1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390
2: 297A-279B, 297-298, 341A-341B, 341-342

5E. Collect and display data.

- 1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316
2: 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

5F. Use statistical methods such as graphs, tables, and charts to interpret data.

- 1: 309A-039B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316
2: 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

Key Idea 6: Uncertainty

Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

6A. Make estimates to compare to actual results of both formal and informal measurement.

- 1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390
2: 297A-279B, 297-298, 341A-341B, 341-342

6B. Make estimates to compare to the actual results of computations.

- 1: 141A-141B, 141-142, 439A-439B, 439-440
2: 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228

6C. Recognize situations in which only an estimate is required.

- 1: 141A-141B, 141-142, 249A-249B, 249-250, 439A-439B, 439-440
2: 141A-141B, 141-142, 149A-149B, 149-150, 191A-191B, 191-192, 229A-229B, 229-230, 429A-429B, 429-430, 445A-445B, 445-446

6D. Develop a wide variety of estimation skills and strategies.

1: 141A-141B, 141-142, 249A-249B, 249-250, 439A-439B, 439-440

2: 141A-141B, 141-142, 149A-149B, 149-150, 191A-191B, 191-192, 229A-229B, 229-230, 429A-429B, 429-430, 445A-445B, 445-446

6E. Determine the reasonableness of results.

1: 141A-141B, 141-142, 439A-439B, 439-440

2: 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228

6F. Predict experimental probabilities.

1: 401A-401B, 401-402, 403A-403B, 403-404

2: 373A-373B, 373-374, 375A-375B, 375-376

6G. Make predictions, using unbiased random samples.

1: related material: 401A-401B, 401-402, 403A-403B, 403-404

2: related material: 373A-373B, 373-374, 375A-375B, 375-376

6H. Determine probabilities of simple events.

1: 401A-401B, 401-402, 403A-403B, 403-404

2: 373A-373B, 373-374, 375A-375B, 375-376

Key Idea 7: Patterns/Functions

Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.

7A. Recognize, describe, extend, and create a wide variety of patterns.

1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262

2: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

7B. Represent and describe mathematical relationships.

1: 261A-261B, 261-262

2: Preparation: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

7C. Explore and express relationships, using variables and open sentences.

1: 261A-261B, 261-262

2: Preparation: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

7D. Solve for an unknown, using manipulative materials.

- 1:** 57A-57B, 57-58, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 129A-129B, 129-130, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142
- 2:** 5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 57A-57B, 57-58

7E. Use a variety of manipulative materials and technologies to explore patterns.

- 1:** 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262
- 2:** 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

7F. Interpret graphs.

- 1:** 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316
- 2:** 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 325A-325B, 325-326, 327A-327B, 327-328

7G. Explore and develop relationships among two- and three-dimensional geometric shapes.

- 1:** 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 165A-165B, 165-166, 167A-167B, 167-168
- 2:** 247A-247B, 247-248, 249A-249B, 249-250, 255A-255B, 255-256

7H. Discover patterns in nature, art, music, and literature.

- 1:** 3A-3B, 3-4, 5A-5B, 5-6
- 2:** 413A-413B, 413-414

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Grades 3-4

Key Idea 1: Mathematical Reasoning

Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

1A. Use models, facts, and relationships to draw conclusions about mathematics and explain their thinking.

3: 4A-4B, 4-5, 6A-6B, 6-7, 10A-10B, 10-11, 12A-12B, 12-13, 498A-498B, 498-501, 502A-502B, 502-503, 504A-504B, 504-505, 512A-512B, 512-513, 516A-516B, 516-517, 518A-518B, 518-519

4: 4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

1B. Use patterns and relationships to analyze mathematical situations.

3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641

1C. Justify their answers and solution processes.

3: 14, 32, 42, 74, 76, 102, 138, 140, 160, 234, 268, 330, 332, 346, 378, 380, 404, 434, 436, 474, 526, 528, 540, 576, 578, 588, 642, 644, 656, 686, 688, 708

4: 203, 301, 302-303, 421, 422-423, 603, 635, 651, 662A-662B, 662-663, 669, 675, 676-677, 715, 717, 719, 725, 726-727

1D. Use logical reasoning to reach simple conclusions.

3: 14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 140-143, 160A-160B, 160-161, 170-171, 216A-216B, 216-217, 236A-236B, 236-237, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294-295, 332A-332B, 332-333, 346A-346B, 346-347, 348-349, 380A-380B, 380-381, 404A-404B, 404-405, 406-407, 436A-436B, 436-439, 474A-474B, 474-475, 476-477, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 590-591, 644A-644B, 644-645, 656A-656B, 656-657, 658-659, 698A-698B, 698-699, 708A-708B, 708-709, 710-711

4: 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512-A512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717

Key Idea 2: Number and Numeration

Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

2A. Use whole numbers and fractions to identify locations, quantify groups of objects, and measure distances.

3: 4A-4B, 4-5, 6A-6B, 6-7, 10A-10B, 10-11, 12A-12B, 12-13, 498A-498B, 498-501, 502A-502B, 502-503, 504A-504B, 504-505, 512A-512B, 512-513, 516A-516B, 516-517, 518A-518B, 518-519

4: 4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

2B. Use concrete materials to model numbers and number relationships for whole numbers and common fractions, including decimal fractions.

3: 140A-140B, 140-143, 204A-204B, 204-207, 208A-208B, 208-211, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235, 236A-236B, 236-237, 270A-270B, 270-273

4: 4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

2C. Relate counting to grouping and to place value.

3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13

4: 4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 628A-628B, 628-629

2D. Recognize order of whole numbers and commonly used fractions and decimals.

3: 18A-18B, 18-21, 22A-22B, 22-23, 506A-506B, 506-509, 568A-568B, 568-571

4: 16A-16B, 16-19, 522A-522B, 522-523, 524A-524B, 524-527, 534A-534B, 534-536, 630A-630B, 630-631

2E. Demonstrate the concept of ratio and per-cent through problems related to actual situations.**3:** preparation: 516-517, 518-519, 520-521, 564-565, 566-567, 568-569**4:** preparation: 516-519, 520-521, 522-523, 624-627, 628-629, 630-631**Key Idea 3: Operations**

Students use mathematical operations and relationships among them to understand mathematics.

3A. Add, subtract, multiply, and divide whole numbers.**3:** 66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97, 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331, 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403**4:** 62A-62B, 62-63, 64A-64B, 64-65, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153, 270A-270B, 270-273, 274A-274B, 274-277, 332A-332B, 332-335, 336A-336B, 336-337, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391**3B. Develop strategies for selecting the appropriate computational and operational method in problem-solving situations.****3:** 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 162A-162B, 162-165, 166A-166B, 166-167**4:** 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 270A-270B, 270-273, 274A-274B, 274-277, 332A-332B, 332-335, 336A-336B, 336-337, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391**3C. Know single digit addition, subtraction, multiplication, and division facts.****3:** 66A-66B, 66-69, 80A-80B, 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331, 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403**4:** 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153

3D. Understand the commutative and associative properties.**3:** 66A-66B, 66-69, 286A-286B, 286-287**4:** 124A-124B, 124-127, 146A-146B, 146-147, 166A-166B, 166-167**Key Idea 4: Modeling/Multiple Representation**

Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

4A. Use concrete materials to model spatial relationships.**3:** 432A-432B, 432-433, 456A-456B, 456-457**4:** 434A-434B, 434-437, 452A-452B, 452-455**4B. Construct tables, charts, and graphs to display and analyze real-world data.****3:** 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235**4:** 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229**4C. Use multiple representations (simulations, manipulative materials, pictures, and diagrams) as tools to explain the operation of everyday procedures.****3:** 140A-140B, 140-143, 204A-204B, 204-207, 208A-208B, 208-211, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235**4:** 4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221**4D. Use variables such as height, weight, temperature, and hand size to predict changes over time.****3:** 208A-208B, 208-211, 222A-222B, 222-223**4:** 206A-206B, 206-207, 216A-216B, 216-221**4E. Use physical materials, pictures, and diagrams to explain mathematical ideas and processes and to demonstrate geometric concepts.****3:** 140A-140B, 140-143, 204A-204B, 204-207, 208A-208B, 208-211, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235, 236A-236B, 236-237, 270A-270B, 270-273**4:** 4A-4B, 4-7, 8A-8B, 8-9, 28A-28B, 28-29, 34A-34B, 34-37, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-213, 216A-216B, 216-221, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 624A-624B, 624-627

Key Idea 5: Measurement

Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

5A. Understand that measurement is approximate, never exact.

3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697

4: 665

5B. Select appropriate standard and nonstandard measurement tools in measurement activities.

3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693

4: 476A-476B, 476-477, 592A-592B, 592-593, 594A-594B, 594-595, 654A-654B, 654-655, 656A-656B, 656-657

5C. Understand the attributes of area, length, capacity, weight, volume, time, temperature, and angles.

3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693

4: 476A-476B, 476-477, 592A-592B, 592-593, 594A-594B, 594-595, 654A-654B, 654-655, 656A-656B, 656-657

5D. Estimate and find measures such as length, perimeter, area, and volume, using both nonstandard and standard units.

3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697

4: 665

5E. Collect and display data.

3: 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

5F. Use statistical methods such as graphs, tables, and charts to interpret data.

3: 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

Key Idea 6: Uncertainty

Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

6A. Make estimates to compare to actual results of both formal and informal measurement.

3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697

4: 665

6B. Make estimates to compare to actual results of computations.

3: 80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

4: 62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637

6C. Recognize situations in which only an estimate is required.

3: 160A-160B, 160-161

4: 600A-600B, 600-601

6D. Develop a wide variety of estimation skills and strategies.

3: 80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

4: 62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637

6E. Determine the reasonableness of results.

3: 80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

4: 62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637

6F. Predict experimental probabilities.

3: 700A-700B, 700-701, 702A-702B, 702-703, 704A-704B, 704-707

4: 700A-700B, 700-703, 706A-706B, 706-709

6G. Make predictions, using unbiased random samples.

3: 204A-204B, 204-207, 208A-208B, 208-211

4: 710A-710B, 710-713

6H. Determine probabilities of simple events.

3: 700A-700B, 700-701, 702A-702B, 702-703, 704A-704B, 704-707

4: 700A-700B, 700-703, 706A-706B, 706-709

Key Idea 7: Patterns/Functions

Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.

7A. Recognize, describe, extend, and create a wide variety of patterns.

3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641

7B. Represent and describe mathematical relationships.

3: 344A-344B, 344-345

4: 164A-164B, 164-165, 692A-692B, 692-695

7C. Explore and express relationships, using variables and open sentences.

3: 344A-344B, 344-345

4: 164A-164B, 164-165, 692A-692B, 692-695

7D. Solve for an unknown, using manipulative materials.

3: 72A-72B, 72-75, 76A-76B, 76-77

4: 76A-76B, 76-79, 98A-98B, 98-99, 100A-100B, 100-101

7E. Use a variety of manipulative materials and technologies to explore patterns.

3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641

7F. Interpret graphs.

3: 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-235

4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 226A-226B, 226-229

7G. Explore and develop relationships among two- and three-dimensional geometric shapes.

3: 428A-428B, 428-431, 442A-442B, 442-443, 444A-444B, 444-445, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455

4: 434A-434B, 434-437, 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449

7H. Discover patterns in nature, art, music, and literature.

3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641

**Scott Foresman – Addison Wesley Mathematics
to the
New York Mathematics Core Curriculum**

Grades 5-6

Key Idea 1: Mathematical Reasoning

Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

1A. Apply a variety of reasoning strategies.

- 5:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512-A512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717
- 6:** 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

1B. Make and evaluate conjectures and arguments, using appropriate language.

- 5:** 292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721
- 6:** 278A-278B, 278-279, 324A-324B, 324-325, 362A-362B, 362-363, 512A-512B, 512-513, 674A-674B, 674-675

1C. Make conclusions based on inductive reasoning.

- 5:** 32A-32B, 32-33, 42A-42B, 42-43, 80A-80B, 80-81, 104A-104B, 104-105, 144A-144B, 144-145, 168A-168B, 168-169, 210A-210B, 210-211, 226A-226B, 226-227, 276A-276B, 276-279, 272A-272B, 272-273, 352A-352B, 352-355, 356A-356B, 356-357, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 504A-504B, 504-505, 558A-558B, 558-559, 570A-570B, 570-571, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B, 660-661, 664A-664B, 664-665, 706A-706B, 706-709, 720A-720B, 720-721

6: 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711

1D. Justify conclusions involving simple and compound (i.e., and/or) statements.

5: 42A-42B, 42-43, 80A-80B, 80-81, 104A-104B, 104-105, 144A-144B, 144-145, 168A-168B, 168-169, 210A-210B, 210-211, 226A-226B, 226-227, 276A-276B, 276-279, 272A-272B, 272-273, 352A-352B, 352-355, 356A-356B, 356-357, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 504A-504B, 504-505, 558A-558B, 558-559, 570A-570B, 570-571, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B, 660-661, 664A-664B, 664-665, 706A-706B, 706-709

6: 36A-36B, 36-37, 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 180A-180B, 180-181, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 278A-278B, 278-279, 312A-312B, 312-313, 324A-324B, 324-235, 362A-362B, 362-363, 374A-374B, 374-375, 414A-414B, 414-415, 434A-434B, 434-436, 490A-490B, 490-491, 512A-512B, 512-513, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707

Key Idea 2: Number and Numeration

Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

2A. Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, and expanded notation).

5: 410A-410B, 410-411, 412A-412B, 412-413, 416A-416B, 416-417, 426A-426B, 426-429

6: 164A-164B, 164-167, 168A-168B, 168-169, 172A-172B, 172-175

2B. Understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.

5: 646A-646B, 646-647, 648A-648B, 648-651, 652A-652B, 652-653, 654A-654B, 654-655, 662A-662B, 662-663, 668A-668B, 668-669, 670A-670B, 670-671, 672A-672B, 672-675

6: 300A-300B, 300-301, 302A-302B, 302-305, 316A-316B, 316-317, 318A-318B, 318-321, 322A-322B, 322-323, 354A-354B, 354-357, 358A-358B, 358-361, 366A-366B, 366-367, 368A-368B, 368-369, 370A-370B, 370-373, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-387

2C. Develop an understanding of number theory (primes, factors, and multiples).**5:** 162A-162B, 162-163, 164A-164B, 164-167**6:** 142A-142B, 142-145, 146A-146B, 146-149, 150A-150B, 150-151, 152A-152B, 152-155**2D. Recognize order relations for decimals, integers, and rational numbers.****5:** 6A-6B, 6-7, 12A-12B, 12-13, 418A-418B, 418-419, 420A-420B, 420-423, 430A-430B, 430-433**6:** 12A-12B, 12-13, 78A-78B, 78-79, 176A-176B, 176-179, 410A-410B, 410-411**Key Idea 3: Operations**

Students use mathematical operations and relationships among them to understand mathematics.

3A. Add, subtract, multiply, and divide fractions, decimals, and integers.**5:** 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483, 490A-490B, 490-493, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 716A-716B, 716-717, 718A-718B, 718-719**6:** 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223, 248A-248B, 248-251, 252A-252B, 252-255, 258A-258B, 258-259, 266A-266B, 266-267, 270A-270B, 270-271**3B. Use grouping symbols (parentheses) to clarify the intended order of operations.****5:** 172A-172B, 172-173**6:** 24A-24B, 24-27, 28A-28B, 28-29, 30A-30B, 30-31, 48A-48B, 48-51, 430A-430B, 430-433**3C. Apply the associative, commutative, and distributive properties, and inverse and identity elements.****5:** 22A-22B, 22-25, 66A-66B, 66-67, 70A-70B, 70-71, 696A-696B, 696-699**6:** 28A-28B, 28-29, 30A-30B, 30-31, 44A-44B, 44-47

3D. Demonstrate an understanding of operational algorithms (procedures for adding, subtracting, etc.).

5: 36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

6: 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204A-204B, 204-205, 206A-206B, 206-211, 252A-252B, 252-255, 266A-266B, 266-267, 418A-418B, 418-421, 422A-422B, 422-425, 426A-426B, 426-427, 428A-428B, 428-429

3E. Develop appropriate proficiency with facts and algorithms.

5: 36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 88A-88B, 88-91, 94A-94B, 94-97, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 224A-224B, 224-225, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237

6: 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 204A-204B, 204-205, 206A-206B, 206-211, 252A-252B, 252-255, 266A-266B, 266-267, 418A-418B, 418-421, 422A-422B, 422-425, 426A-426B, 426-427, 428A-428B, 428-429

3F. Apply concepts of ratio and proportion to solve problems.

5: 646A-646B, 646-647, 648A-648B, 648-651, 652A-652B, 652-653, 654A-654B, 654-655, 662A-662B, 662-663

6: 300A-300B, 300-301, 302A-302B, 302-305, 316A-316B, 316-317, 318A-318B, 318-321, 322A-322B, 322-323

Key Idea 4: Modeling/Multiple Representation

Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.

4A. Visualize, represent, and transform two-and three-dimensional shapes.

5: 328A-328B, 328-331, 332A-332B, 332-335, 336A-336B, 336-337, 340A-340B, 340-341, 364A-364B, 364-367

6: 472A-472B, 472-475, 476A-476B, 476-479, 480A-480B, 480-483, 484A-484B, 484-489, 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 510A-510B, 510-5, 586A-586B, 586-589

4B. Use maps and scale drawings to represent real objects or places.**5:** 662A-662B, 662-663**6:** 330A-330B, 330-333**4C. Use the coordinate plane to explore geometric ideas.****5:** 724A-724B, 724-727**6:** 510A-510B, 510-511, 512A-512B, 512-513**4D. Represent numerical relationships in one-and two-dimensional graphs.****5:** 724A-724B, 724-727, 728A-728B, 728-729**6:** 698A-698B, 698-6999, 718A-718B, 718-721**4E. Use variables to represent relationships.****5:** 100A-100B, 100-103, 104A-104B, 104-105, 108A-108B, 108-109, 176A-176B, 176-179, 660A-660B, 660-661, 706A-706B, 706-709**6:** 48A-48B, 48-51, 430A-430B, 430-433, 712A-712B, 712-715**4F. Use concrete materials and diagrams to describe the operation of real-world processes and systems.****5:** 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727**6:** 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721**4G. Develop and explore models that do and do not rely on chance.****5:** 25, 75, 179, 217, 291, 335, 423, 469, 539, 699**6:** 29, 93, 255, 361, 443, 715**4H. Investigate both two- and three-dimensional transformations.****5:** 364A-364B, 364-367**6:** 510A-510B, 510-511**4I. Use appropriate tools to represent and verify geometric relationships.****5:** 328A-328B, 328-331, 332A-332B, 332-335, 336A-336B, 336-337, 340A-340B, 340-341, 364A-364B, 364-367**6:** 472A-472B, 472-475, 476A-476B, 476-479, 480A-480B, 480-483, 484A-484B, 484-489, 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 510A-510B, 510-5, 586A-586B, 586-589:

Key Idea 5: Measurement

Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.

5A. Estimate, make, and use measurements in real-world situations.

5: 332A-332B, 332-335, 532A-532B, 532-533, 540A-540B, 540-541, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557
6: 542A-542B, 542-545, 546A-546B, 546-549, 550A-550B, 550-551

5B. Select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy.

5: 332A-332B, 332-335, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557
6: 476A-476B, 476-479, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 590A-590B, 590-593, 594A-594B, 594-597

5C. Develop measurement skills and informally derive and apply formulas in direct measurement activities.

5: 540A-540B, 540-541, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553
6: 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581

5D. Use statistical methods and measures of central tendencies to display, describe, and compare data.

5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 282A-282B, 282-285, 286A-286B, 286-287
6: 624A-624B, 624-627, 628A-628B, 628-631, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647

5E. Explore and produce graphic representations of data. (Calculators/computers may be used.)

5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287
6: 628A-628B, 628-631, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647

5F. Develop critical judgment for the reasonableness of measurement.

5: 332A-332B, 332-335, 532A-532B, 532-533, 540A-540B, 540-541, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557
6: 542A-542B, 542-545, 546A-546B, 546-549, 550A-550B, 550-551

Key Idea 6: Uncertainty

Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

6A. Use estimation to check the reasonableness of results obtained by computation, algorithms, or the use of technology.

5: 28A-28B, 28-31, 68A-68B, 68-70, 86A-86B, 86-87, 138A-138B, 138-143, 204A-204B, 204-209, 474A-474B, 474-475, 494A-494B, 494-495, 672A-672B, 672-675

6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369

6B. Use estimation to solve problems for which exact answers are inappropriate.

5: 624A-624B, 624-625

6: 226A-226B, 226-227

6C. Estimate the probability of events.

5: 296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

6: 662A-662B, 662-663, 664A-664B, 664-665

6D. Use simulation techniques to estimate probabilities.

5: 296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

6: 662A-662B, 662-663, 664A-664B, 664-665, 668A-668B, 668-671, 672A-672B, 672-673

6E. Determine probabilities of independent events.

5: 296A-296B, 296-299, 300A-300B, 300-301, 302A-032B, 302-305

6: 662A-662B, 662-663, 664A-664B, 664-665, 668A-668B, 668-671, 672A-672B, 672-673

Key Idea 7: Patterns/Functions

Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.

7A. Recognize, describe, and generalize a wide variety of patterns and functions.

5: 14A-14B, 14-17, 66A-66B, 66-67, 84A-84B, 84-85, 106A-106B, 106-107, 136A-136B, 136-137, 728A-728B, 728-729

6: 212A-212B, 212-213, 444A-444B, 444-447

7B. Describe and represent patterns and functional relationships, using tables, charts and graphs, and verbal descriptions.

5: 106A-106B, 106-107, 728A-728B, 728-729

6: 444A-444B, 444-447, 448A-448B, 448-449

7C. Develop methods to solve basic linear equations.

5: 108A-108B, 108-109, 700A-700B, 700-701, 702A-702B, 702-705

6: 48A-48B, 48-51, 430A-430B, 430-433, 712A-712B, 712-715

7D. Develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another.

5: 106A-106B, 106-107, 728A-728B, 728-729

6: 444A-444B, 444-447, 448A-448B, 448-449

7E. Apply the concept of similarity in relevant situations.

5: 360A-360B, 360-363

6: 506A-506B, 506-509

7F. Use properties of polygons to classify them.

5: 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351

6: 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501

7G. Explore relationships involving points, lines, angles, and planes.

5: 328A-328B, 328-331, 332A-332B, 332-335, 336A-336B, 336-337

6: 472A-472B, 472-475, 476A-476B, 476-479, 480A-480B, 480-483, 484A-484B, 484-489

7H. Develop readiness for basic concepts of right triangle trigonometry.

5: 554A-554B, 554-557

6: 496A-496B, 496-499, 572A-572B, 572-575

7I. Use patterns and functions to represent and solve problems.

5: 106A-106B, 106-107, 728A-728B, 728-729

6: 444A-444B, 444-447, 448A-448B, 448-449