

A Correlation of

**SCOTT FORESMAN • ADDISON WESLEY**

# **Mathematics**

to the

## **Washington Essential Academic Learning Requirements Mathematics Grades K - 6**



M/M-102

## 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 Washington Essential Academic Learning Requirements for Mathematics. 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.

## Table of Contents

**Grades K - 4.....1**

**Grades 5 & 6.....51**

**Scott Foresman – Addison Wesley Mathematics  
to the  
Washington  
Essential Academic Learning Requirements – Mathematics  
Grades K - 4**

**1. The student understands and applies the concepts and procedures of mathematics.**

*To meet this standard, the student will:*

**Benchmark 1**

**1.1 Understand and apply concepts and procedures from number sense.**

**Number and Numeration**

- **Demonstrate understanding of whole and fractional numbers and place value in whole numbers using objects, pictures, or symbols.**

**Grade K:** 51I, 75I, 52, 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 61A-61B, 61-62, 65A-65B, 65-66, 71A-71B, 71-72, 73, 74, 76, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 97A-97B, 97, 99, 100, 101I, 102, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112, 115A-115B, 115-116, 117A-117B, 117-118, 129, 130, 215A-215B, 215-216, 217A-217B, 217-218, 222

**Grade 1:** 155I, 183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 195, 199, 202, 279I, 281A-281B, 281-282, 283A-283B, 283-284, 285A-285B, 285-286, 293

**Grade 2:** 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 89A-89B, 89-90, 93, 131, 245J, 269A-269B, 269-270, 271A-271B, 271-272, 273A-273B, 273-274, 277A-277B, 277-278, 281, 283, 288, 381I, 391A-391B, 391-392, 393A-393B, 393-394, 395A-395B, 395-396, 403, 404, 423, 424

**Grade 3:** 2I, 2J, 2, 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13, 16, 17, 41, 50, 52, 53, 54, 56, 57, 60, 61, 64, 101, 114, 127, 143, 167, 169, 180, 191, 304, 358, 373, 389, 496I, 497, 498A-498B, 498-501, 502A-502B, 502-503, 512A-512B, 512-513, 514, 515, 516A-516B, 516-517, 519, 522A-522B, 522-525, 530, 531, 533, 542A-542B, 542, 547, 548, 550, 551, 552, 554, 555, 556, 558, 559, 560, 562, 615, 617, 668, 679

**Grade 4:** 2J, 2, 4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 14, 15, 22A-22B, 22-23, 26, 27, 46, 48, 49, 50, 52, 53, 56, 498I, 499, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 514, 515, 516A-516B, 516-519, 520A-520B, 520-521, 528, 529, 530A-530B, 530-533, 536A-536B, 536-537, 542, 543, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559

- **Identify, compare, and order whole numbers and simple fractions.**

**Grade K:** 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 47, 49, 51J, 63A-63B, 63-64, 65A-65B, 65-66, 73, 74, 75J, 87A-87B, 87-88, 89A-89B, 89-90, 91A-91B, 91-92, 100, 121A-121B, 121-122, 123A-123B, 123-124

**Grade 1:** 29A-29B, 29-30, 31A-31B, 31-32, 35, 36, 39, 42, 239J, 245A-245B, 245-246, 253, 263A-263B, 263-264, 277, 278, 279J, 297A-297B, 297-298, 301A-301B, 301-302, 304, 305, 320, 322, 327, 328, 328A

**Grade 2:** 91A-91B, 91-92, 93, 97A-97B, 97-98, 108, 131, 132, 389J, 399A-399B, 399-400, 403, 407A-407B, 407-408, 409A-409B, 409-410, 417, 419, 423, 424

**Grade 3:** 2I, 2, 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13, 16, 17, 18A-18B, 18-21, 22A-22B, 22-23, 31, 34, 35, 41, 48, 49, 50, 52, 53, 54, 56, 57, 58, 60, 61, 62, 64, 71, 97, 101, 114, 125, 127, 143, 167, 169, 180, 191, 210, 304, 358, 373, 389, 445, 496I, 497, 502A-502B, 502-503, 504A-504B, 504-505, 506A-506B, 506-509, 512A-512B, 512-513, 514, 515, 516A-516B, 516-517, 519, 522A-522B, 522-525, 530, 531, 533, 542, 543, 547, 548, 550, 551, 552, 553, 554, 555, 556, 558, 559, 560, 562, 615, 617, 668, 679

**Grade 4:** 2, 4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 14, 15, 16A-16B, 16-19, 21, 22A-22B, 22-23, 26, 27, 46, 48, 49, 50, 52, 53, 56, 57, 499, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 514, 515, 516A-516B, 516-519, 520A-520B, 520-521, 522A-522B, 522-523, 524A-524B, 524-527, 528, 529, 530A-530B, 530-533, 534A-534B, 534-535, 536A-536B, 536-537, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559

- **Demonstrate an understanding of the properties of whole numbers.**

**Grade K:** Prerequisite concept: 223I, 233A-233B, 233-234

**Grade 1:** 51A-51B, 51-52, 59, 60, 87, 88B, 93A-93B, 93-94, 101, 122, 427A-427B, 427-428, 433, 455

**Grade 2:** 23A-23B, 23-24, 33, 39, 49A-49B, 49-50, 59, 77, 187A-187B, 187-188, 201, 208, 465J, 473A-473B, 473-474, 481, 497

**Grade 3:** 66A-66B, 66-69, 78, 110, 120, 258J, 262A-262B, 262-265, 274, 275, 286A-286B, 286-287, 296, 297, 300, 301, 303, 306, 309, 310, 313, 319, 321, 328, 329, 341, 342A-342B, 342-343, 354, 355, 361, 362, 354, 365, 366, 367

**Grade 4:** 62A-62B, 62-63, 108, 128A-128B, 128-131, 132A-132B, 132-135, 174, 176, 180, 184

**Computation**

- **Show understanding of whole number operations (+, -, ×, ÷) using blocks, sticks, beans, pictures, symbols, etc.**

**Grade K:** 243I, 243J, 251A-251B, 251-242, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 260, 262, 263I, 263J, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278, 279A-279B, 281A-281B, 281-282, 279-280, 284

**Grade 1:** 43I, 43J, 44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59, 60, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 69A-69B, 69-70, 71A-71B, 71-72, 73, 74, 75A-75B, 75-76, 77A-77B, 77-78, 79A-79B, 79-80, 81, 82, 83, 84, 85, 86, 87, 88, 88A, 88B, 89I, 89J, 90, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 99A-99B, 99-100, 101, 102, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109-110, 111A-112B, 111-112, 113A-113B, 113-114, 115, 116, 117, 118, 119, 120, 121, 122, 123I, 123J, 124, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 131-132, 133A-133B, 133-134, 135, 136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147, 148, 149, 150, 151, 152, 153, 154, 154A, 154B, 164, 415I, 415J, 416, 417A-417B, 417-418, 419A-419B, 419-420, 421A-421B, 421-422, 423A-423B, 423-424, 425A-425B, 425-426, 427A-427B, 427-428, 433, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440, 441A-441B, 441-442, 443A-443B, 443-444, 445A-445B, 445-446, 447A-447B, 447-448, 449, 450, 451, 452, 453, 454, 455, 456, 457I, 457J, 458, 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 469, 470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478, 483A-483B, 483-484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 492

**Grade 2:** 1I, 1J, 3A-3B, 3-4, 5A-5B, 5-6, 9A-9B, 9-10, 11, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 21, 22, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 34, 35, 39, 40, 41I, 41J, 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 59, 60, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 71, 72, 73, 77, 78, 78A, 78B, 133I, 133J, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 143, 144, 145A-145B, 145-146, 147A-147B, 147-148, 151, 152, 159A-159B, 159-160, 162, 165, 166, 171, 172, 173I, 173J, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 183, 184, 185A-185B, 195-186, 187A-187B, 187-188, 193A-193B, 193-194, 201, 207, 208, 209I, 209J, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 223, 224, 225A-225B, 225-226, 231A-231B, 231-232, 237,

238, 243, 244, 244A, 244B, 425I, 425J, 427A-427B, 431A-431B, 433A-433B, 435A-435B, 435-436, 441, 442, 443A-443B, 447A-447B, 447-478, 449A-449B, 449-450, 451A-451B, 451-452, 457, 458, 463, 464, 465I, 465J, 467A-467B, 467-468, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 481, 482, 483A-483B, 483-484, 491, 492, 493, 497, 498, 498A

**Grade 3:** 64, 65, 66A-66B, 66-69, 70A-70B, 70-71, 80A-80B, 80-81, 82A-82B, 82-85, 89, 92, 93, 94A-94B, 94-95, 96A-96B, 96-97, 101, 106, 107, 110, 112, 113, 114, 116, 117, 118, 119, 120, 121, 122, 123, 124, 124I, 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 144, 145, 148A-48B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 158, 159, 165, 166A-166B, 166-167, 172, 173, 176, 177, 178, 179, 180, 182, 183, 184, 185, 186, 187, 188, 189, 195, 199, 215, 248, 258, 258I, 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-267, 273, 274, 275, 276A-276B, 276-279, 280A-280B, 280-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 296, 297, 300, 301, 302, 303, 304, 306, 307, 308, 309, 310, 311, 312, 313, 314I, 314J, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-329, 335, 336, 337, 339, 340A-340B, 340-341, 342A-342B, 342-343, 345, 350, 351, 354, 355, 356, 358, 360, 361, 362, 364, 365, 366, 367, 368, 369, 370A-370B, 370-371, 372A-372B, 372-373, 374A-374B, 374-377, 382, 383, 384A-384B, 384-385, 386A-386B, 386I, 386J, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 394, 395, 396A-396B, 396-397, 398A-398B, 398-401, 402A-402B, 402-403, 408, 409, 412, 413, 416, 418, 419, 420, 421, 422, 423, 424, 425, 427, 431, 443, 449, 453, 459, 473, 486, 487, 501, 519, 520A-520B, 520-521, 537, 539, 567, 610I, 610J, 610, 611, 612A-612B, 612-615, 617, 618A-618B, 618-621, 623, 624, 625, 626A-626B, 626-629, 630A-630B, 630-631, 632A-632B, 632-635, 636A-636B, 636-637, 640A-641B, 640-641, 646, 647, 648A-648B, 648-649, 650A-650B, 650-651, 652A-652B, 652-655, 656A-656B, 656-657, 660, 661, 664, 665, 666, 667, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 683, 695, 701, 707

**Grade 4:** 61, 62A-62B, 62-63, 64A-64B, 64-67, 71, 74, 75, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 92, 93, 108, 109, 110, 111, 112, 114, 115, 118, 119, 120, 122I, 122J, 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 143, 144, 145, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153, 155, 158, 159, 174, 175, 176, 177, 180, 182, 184, 186, 254J, 255, 256A-256B, 256-257, 261, 262A-262B, 262-263, 264A-264B, 264-267, 268, 269, 270A-270B, 270-273, 274A-274B, 274-275, 281, 282A-282B, 282-283, 284, 285, 288A-288B, 288-289, 294, 295, 298, 299, 300, 301, 304, 305, 306, 307, 308, 309, 310, 311, 312I, 312J, 313, 314A-314B, 314-315, 319, 320A-320B, 320-323, 330, 331, 332A-332B, 332-335, 336A-336B, 336-337, 338A-338B, 338-339, 346, 347, 350, 351, 352, 353, 356, 357, 358, 360, 361, 362, 363, 364I, 464J, 364, 365, 366A-366B, 366-367, 371,

372A-372B, 372-373, 374A-374B, 374-377, 378, 379, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-389, 390A-390B, 390-391, 392A-392B, 392-393, 400, 401, 402A-402B, 402-403, 406A-406B, 406-407, 408A-408B, 408-411, 414, 415, 418, 419, 420, 424, 425, 426, 427, 428, 429, 430, 431

- **Add, subtract, multiply, and divide whole numbers.**

**Grade K:** 243I, 243J, 244, 245A-245B, 245-246, 247A-247B, 247-248, 249A-249B, 249-250, 251A-251B, 251-242, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 260, 261, 262, 263I, 263J, 265A-265B, 265-266, 267A-267B, 267-268, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278, 279A-279B, 279-280, 281A-281B, 281-282, 283, 284

**Grade 1:** 43I, 43J, 44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59, 60, 61A-61B, 61-62, 62A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 69A-69B, 69-70, 71A-71B, 71-72, 73, 74, 75A-75B, 75-76, 77A-77B, 77-78, 79A-79B, 79-80, 81, 82, 83, 84, 85, 86, 87, 88, 88A, 88B, 89I, 89J, 90, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 99A-99B, 99-100, 101, 102, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109-110, 111A-112B, 111-112, 113A-113B, 113-114, 115, 116, 117, 118, 119, 120, 121, 122, 123I, 123J, 124, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 131-132, 133A-133B, 133-134, 135, 136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147, 148, 149, 150, 151, 152, 153, 154, 154A, 154B, 164, 415I, 415J, 416, 417A-417B, 417-418, 419A-419B, 419-420, 421A-421B, 421-422, 423A-423B, 423-424, 425A-425B, 425-426, 427A-427B, 427-428, 433, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440, 441A-441B, 441-442, 443A-443B, 443-444, 445A-445B, 445-446, 447A-447B, 447-448, 449, 450, 451, 452, 453, 454, 455, 456, 457I, 457J, 458, 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 469, 470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478, 483A-483B, 483-484, 485, 486, 487, 488, 489, 490, 491, 492, 493

**Grade 2:** 1I, 1J, 3A-3B, 3-4, 5A-5B, 5-6, 9A-9B, 9-10, 11, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 21, 22, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 34, 35, 39, 40, 41I, 41J, 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 59, 60, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 71, 72, 73, 77, 78, 78A, 78B, 133I, 133J, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 143, 144, 145A-145B, 145-146, 147A-147B, 147-148, 151, 152, 159A-159B, 159-160, 162, 165, 166, 171, 172, 173I, 173J, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 183, 184,



185A-185B, 195-186, 187A-187B, 187-188, 193A-193B, 193-194, 201, 207, 208, 209I, 209J, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 223, 224, 225A-225B, 225-226, 231A-231B, 231-232, 237, 238, 243, 244, 244A, 244B, 425I, 425J, 427A-427B, 431A-431B, 433A-433B, 435A-435B, 435-436, 441, 442, 443A-443B, 447A-447B, 447-478, 449A-449B, 449-450, 451A-451B, 451-452, 457, 458, 463, 464, 465I, 465J, 467A-467B, 467-468, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 481, 482, 483A-483B, 483-484, 491, 492, 493, 497, 498A, 498

**Grade 3:** 64, 65, 66A-66B, 66-69, 70A-70B, 70-71, 80A-80B, 80-81, 82A-82B, 82-85, 89, 92, 93, 94A-94B, 94-95, 96A-96B, 96-97, 101, 106, 107, 110, 112, 113, 114, 116, 117, 118, 119, 120, 121, 122, 123, 124, 124I, 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 144, 145, 148A-48B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 158, 159, 165, 166A-166B, 166-167, 172, 173, 176, 177, 178, 179, 180, 182, 183, 184, 185, 186, 187, 188, 189, 195, 199, 215, 248, 258, 258I, 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-267, 273, 274, 275, 276A-276B, 276-279, 280A-280B, 280-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 296, 297, 300, 301, 302, 303, 304, 306, 307, 308, 309, 310, 311, 312, 313, 314I, 314J, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-329, 335, 336, 337, 339, 340A-340B, 340-341, 342A-342B, 342-343, 345, 350, 351, 354, 355, 356, 358, 360, 361, 362, 364, 365, 366, 367, 368, 369, 370A-370B, 370-371, 372A-372B, 372-373, 374A-374B, 374-377, 382, 383, 384A-384B, 384-385, 386A-386B, 386I, 386J, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 394, 395, 396A-396B, 396-397, 398A-398B, 398-401, 402A-402B, 402-403, 408, 409, 412, 413, 416, 418, 419, 420, 421, 422, 423, 424, 425, 427, 431, 443, 449, 453, 459, 473, 486, 487, 501, 519, 520A-520B, 520-521, 537, 539, 567, 610I, 610J, 610, 611, 612A-612B, 612-615, 617, 618A-618B, 618-621, 623, 624, 625, 626A-626B, 626-629, 630A-630B, 630-631, 632A-632B, 632-635, 636A-636B, 636-637, 640A-641B, 640-641, 646, 647, 648A-648B, 648-649, 650A-650B, 650-651, 652A-652B, 652-655, 656A-656B, 656-657, 660, 661, 664, 665, 666, 667, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 683, 695, 701, 707

**Grade 4:** 61, 62A-62B, 62-63, 64A-64B, 64-67, 71, 74, 75, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 92, 93, 108, 109, 110, 111, 112, 114, 115, 118, 119, 120, 122I, 122J, 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 143, 144, 145, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153, 155, 158, 159, 174, 175, 176, 177, 180, 182, 184, 186, 254J, 255, 256A-256B, 256-257, 261, 262A-262B, 262-263, 264A-264B, 264-267, 268, 269, 270A-270B, 270-273, 274A-274B, 274-275, 281, 282A-282B, 282-283, 284, 285, 288A-288B, 288-289, 294, 295, 298,

299, 300, 301, 304, 305, 306, 307, 308, 309, 310, 311, 312I, 312J, 313, 314A-314B, 314-315, 319, 320A-320B, 320-323, 330, 331, 332A-332B, 332-335, 336A-336B, 336-337, 338A-338B, 338-339, 346, 347, 350, 351, 352, 353, 356, 357, 358, 360, 361, 362, 363, 364I, 364J, 364, 365, 366A-366B, 366-367, 371, 372A-372B, 372-373, 374A-374B, 374-377, 378, 379, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-389, 390A-390B, 390-391, 392A-392B, 392-393, 400, 401, 402A-402B, 402-403, 406A-406B, 406-407, 408A-408B, 408-411, 414, 415, 418, 419, 420, 424, 425, 426, 427, 428, 429, 430, 431

- **Use mental arithmetic, pencil and paper, or calculator as appropriate to the task involving whole numbers.**

**Grade K:** 224, 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 235A-235B, 235-236, 237A-237B, 237-238, 239A-239B, 239-240, 241, 242, 243I, 243J, 244, 245A-245B, 245-246, 247A-247B, 247-248, 249A-249B, 249-250, 251A-251B, 251-242, 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 260, 261, 262, 263I, 263J, 265A-265B, 265-266, 267A-267B, 267-268, 271A-271B, 271-272, 273A-273B, 273-274, 275A-275B, 275-276, 277A-277B, 277-278, 279A-279B, 279-280, 281A-281B, 281-282, 283, 284

**Grade 1:** 43I, 43J, 44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59, 60, 61A-61B, 61-62, 62A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 69A-69B, 69-70, 71A-71B, 71-72, 73, 74, 75A-75B, 75-76, 77A-77B, 77-78, 79A-79B, 79-80, 81, 82, 83, 84, 85, 86, 87, 88, 88A, 88B, 89I, 89J, 90, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 99A-99B, 99-100, 101, 102, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109-110, 111A-112B, 111-112, 113A-113B, 113-114, 115, 116, 117, 118, 119, 120, 121, 122, 123I, 123J, 124, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 131-132, 133A-133B, 133-134, 135, 136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147, 148, 149, 150, 151, 152, 153, 154, 154A, 154B, 164, 415I, 415J, 416, 417A-417B, 417-418, 419A-419B, 419-420, 421A-421B, 421-422, 423A-423B, 423-424, 425A-425B, 425-426, 427A-427B, 427-428, 433, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440, 441A-441B, 441-442, 443A-443B, 443-444, 445A-445B, 445-446, 447A-447B, 447-448, 449, 450, 451, 452, 453, 454, 455, 456, 457I, 457J, 458, 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 469, 470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478, 483A-483B, 483-484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 492

**Grade 2:** 1I, 1J, 3A-3B, 3-4, 5A-5B, 5-6, 9A-9B, 9-10, 11, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 21, 22, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 34, 35, 39, 40, 41I, 41J, 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 59, 60, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 71, 72, 73, 77, 78, 78A, 78B, 133I, 133J, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 143, 144, 145A-145B, 145-146, 147A-147B, 147-148, 151, 152, 159A-159B, 159-160, 162, 165, 166, 171, 172, 173I, 173J, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 183, 184, 185A-185B, 195-186, 187A-187B, 187-188, 193A-193B, 193-194, 201, 207, 208, 209I, 209J, 211A-211B, 211-212, 213A-213B, 213-214, 215A-215B, 215-216, 217A-217B, 217-218, 223, 224, 225A-225B, 225-226, 231A-231B, 231-232, 237, 238, 243, 244, 244A, 244B, 425I, 425J, 427A-427B, 431A-431B, 433A-433B, 435A-435B, 435-436, 441, 442, 443A-443B, 447A-447B, 447-478, 449A-449B, 449-450, 451A-451B, 451-452, 457, 458, 463, 464, 465I, 465J, 467A-467B, 467-468, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 481, 482, 483A-483B, 483-484, 491, 492, 493, 497, 498A, 498

**Grade 3:** 64, 65, 66A-66B, 66-69, 70A-70B, 70-71, 80A-80B, 80-81, 82A-82B, 82-85, 89, 92, 93, 94A-94B, 94-95, 96A-96B, 96-97, 101, 106, 107, 110, 112, 113, 114, 116, 117, 118, 119, 120, 121, 122, 123, 124, 124I, 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 144, 145, 148A-48B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 158, 159, 165, 166A-166B, 166-167, 172, 173, 176, 177, 178, 179, 180, 182, 183, 184, 185, 186, 187, 188, 189, 195, 199, 215, 248, 258, 258I, 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-267, 273, 274, 275, 276A-276B, 276-279, 280A-280B, 280-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 296, 297, 300, 301, 302, 303, 304, 306, 307, 308, 309, 310, 311, 312, 313, 314I, 314J, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-329, 335, 336, 337, 339, 340A-340B, 340-341, 342A-342B, 342-343, 345, 350, 351, 354, 355, 356, 358, 360, 361, 362, 364, 365, 366, 367, 368, 369, 370A-370B, 370-371, 372A-372B, 372-373, 374A-374B, 374-377, 382, 383, 384A-384B, 384-385, 386A-386B, 386I, 386J, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 394, 395, 396A-396B, 396-397, 398A-398B, 398-401, 402A-402B, 402-403, 408, 409, 412, 413, 416, 418, 419, 420, 421, 422, 423, 424, 425, 427, 431, 443, 449, 453, 459, 473, 486, 487, 501, 519, 520A-520B, 520-521, 537, 539, 567, 610I, 610J, 610, 611, 612A-612B, 612-615, 617, 618A-618B, 618-621, 623, 624, 625, 626A-626B, 626-629, 630A-630B, 630-631, 632A-632B, 632-635, 636A-636B, 636-637, 640A-641B, 640-641, 646, 647, 648A-648B, 648-649, 650A-650B, 650-651, 652A-652B, 652-655, 656A-656B, 656-657, 660, 661, 664, 665, 666, 667, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 683, 695, 701, 707

**Grade 4:** 61, 62A-62B, 62-63, 64A-64B, 64-67, 71, 74, 75, 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 92, 93, 108, 109, 110, 111, 112, 114, 115, 118, 119, 120, 122I, 122J, 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 143, 144, 145, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153, 155, 158, 159, 174, 175, 176, 177, 180, 182, 184, 186, 254J, 255, 256A-256B, 256-257, 261, 262A-262B, 262-263, 264A-264B, 264-267, 268, 269, 270A-270B, 270-273, 274A-274B, 274-275, 281, 282A-282B, 282-283, 284, 285, 288A-288B, 288-289, 294, 295, 298, 299, 300, 301, 304, 305, 306, 307, 308, 309, 310, 311, 312I, 312J, 313, 314A-314B, 314-315, 319, 320A-320B, 320-323, 330, 331, 332A-332B, 332-335, 336A-336B, 336-337, 338A-338B, 338-339, 346, 347, 350, 351, 352, 353, 356, 357, 358, 360, 361, 362, 363, 364I, 364J, 364, 365, 366A-366B, 366-367, 371, 372A-372B, 372-373, 374A-374B, 374-377, 378, 379, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-389, 390A-390B, 390-391, 392A-392B, 392-393, 400, 401, 402A-402B, 402-403, 406A-406B, 406-407, 408A-408B, 408-411, 414, 415, 418, 419, 420, 424, 425, 426, 427, 428, 429, 430, 431

### **Estimation**

- **Identify situations involving whole numbers in which estimation is useful.**

**Grade K:** 119A-119B, 119-120, 141A-141B, 141-142, 143A-143B, 143-144, 147A-17B, 147-148, 151A-151B, 151-152, 157, 158

**Grade 1:** 249A-249B, 249-250, 253, 272, 299A-299B, 299-300, 351A-351B, 351-352, 442, 467A-467B, 467-468, 469, 492

**Grade 2:** 133I, 141A-141A, 141-142, 143, 149A-149B, 149-150, 151, 169, 170, 171, 172, 191A-191B, 191-192, 201, 208, 229A-229B, 229-230, 237, 244, 244B, 429A-429B, 429-430, 441, 445A-445B, 445-446, 452, 453A-453B, 453-454, 457, 463, 464

**Grade 3:** 28A-28B, 28-31, 39, 50, 53, 54, 58, 62, 64I, 64J, 65, 86A-86B, 86-89, 90A-90B, 90-91, 92, 93, 98A-98B, 98-101, 103, 105, 106, 107, 111, 112, 113, 114, 118, 119, 122, 123, 125, 127, 131, 160A-160B, 160-161, 165, 166, 170, 177, 179, 182, 183, 184, 185, 197, 327, 411, 503, 610J, 611, 616A-616B, 616-617, 622A-622B, 622-623, 624, 625, 629, 637, 639, 641, 646, 647, 649, 652A-652B, 652-653, 660, 664, 670, 671, 674, 676

**Grade 4:** 20A-20B, 20-21, 23, 26, 27, 31, 45, 46, 48, 49, 53, 57, 60I, 60, 68A-68B, 68-71, 72A-72B, 72-73, 74, 75, 79, 97, 108, 111, 114, 115, 118, 119, 143, 207, 244, 254I, 255, 258A-258B, 258-261, 263, 268, 269, 278A-278B, 278-281, 284, 285, 296, 297, 298, 299, 300, 301, 302, 304, 306, 308, 310, 313, 315, 316A-316B, 316-319, 323, 330, 331, 350, 352, 353, 354, 356, 360, 364J, 368A-368B, 368-371, 373, 378, 379, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391, 393, 408A-408B, 408-411, 414, 415, 418, 421, 422, 424, 425, 426, 428, 431, 488, 577, 631

- **Use estimation to predict computation results and to determine the reasonableness of answers, for example, estimating a grocery bill.**
  - Grade K:** Prerequisite concept: 119A-119B, 119-120
  - Grade 1:** 351A-351B, 351-352, 442, 467A-467B, 467-468, 469, 492
  - Grade 2:** 133I, 141A-141A, 141-142, 143, 149A-149B, 149-150, 151, 169, 170, 171, 172, 191A-191B, 191-192, 201, 208, 229A-229B, 229-230, 237, 244, 244B, 429A-429B, 429-430, 441, 445A-445B, 445-446, 452, 453A-453B, 453-454, 457, 463, 464
  - Grade 3:** 64I, 64J, 86A-86B, 86-89, 90-91, 92, 93, 98-101, 103, 105, 106, 107, 111, 112, 113, 114, 118, 119, 122, 123, 125, 127, 125, 127, 131, 160A-160B, 160-161, 162A-162B, 162-163, 165, 166, 177, 179, 182, 183, 184, 185, 411, 610J, 616A-616B, 616-617, 622-623, 624, 625, 629, 637, 639, 641, 646, 647, 649, 652A-652B, 652-653, 654, 660, 664, 670, 671, 674, 676
  - Grade 4:** 60I, 68A-68B, 68-71, 72A-72B, 72-73, 74, 75, 79, 108, 111, 114, 115, 118, 119, 143, 244, 254I, 258A-258B, 258-261, 263, 268, 269, 278A-278B, 278-281, 284, 285, 298, 299, 300, 301, 302, 304, 306, 308, 310, 313, 315, 316A-316B, 316-319, 323, 330, 331, 350, 352, 353, 354, 356, 360, 364J, 368A-368B, 368-371, 373, 378, 379, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391, 393, 408A-408B, 408-411, 414, 415, 418, 421, 422, 424, 425, 426, 428, 431, 488, 577

## 1.2 Understand and apply concepts and procedures from measurement.

### Attributes and Dimensions

- **Understand concepts of perimeter, area, and volume.**
  - Grade K:** 143A-143B, 143-144, 158
  - Grade 1:** 377A-377B, 377-378, 379A-379B, 379-380, 381, 400, 413, 414A
  - Grade 2:** 351A-351B, 351-352, 359A-359B, 359-360, 361, 384, 387, 388
  - Grade 3:** 426J, 464A-464B, 464-467, 468A-468B, 468-471, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478, 479, 480, 481, 483, 485, 486, 491, 495, 501, 552, 600
  - Grade 4:** 432J, 464A-464B, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 480, 481, 482, 483, 485, 487, 493, 496, 497, 550, 676, 726
- **Use directly measurable attributes such as length, perimeter, area, volume/capacity, angle, weight/mass, time, money, and temperature to describe and compare objects.**
  - Grade K:** 131I, 131J, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 151A-151B, 151-152, 153A-153B,

153-154, 155, 156, 157, 158, 159J, 173A-173B, 173-174, 175A-175B, 175-176, 179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184, 187A-187B, 187-188, 191A-191B, 191, 192, 193

**Grade 1:** 203I, 203J, 204, 207A-207B, 207-208, 209A-209B, 209-210, 211A-211B, 211-212, 213-214, 215A-215B, 215-216, 217, 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229, 230, 232, 233, 234, 235, 236, 237, 238, 239, 329I, 329J, 330, 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 341, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 353A-353B, 353, 355, 356, 357, 358, 359, 361, 362, 371A-372B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 377A-377B, 377-378, 385A-385B, 385-386, 387A-387B, 387-388, 391A-391B, 391-392, 393A-393B, 393-394, 395A-395B, 395-396, 400, 412, 413, 414, 414A, 414B

**Grade 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, 123A-123B, 123-124, 125, 127, 128, 130, 132, 289I, 291A-291B, 291-292, 293A-293B, 293-294, 295A-295B, 295-296, 301A-301B, 301-302, 303A-303B, 303-304, 306, 307, 318, 337, 339I, 341A-341B, 341-342, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 351A-351B, 351-352, 353A-353B, 353-354, 355A-355B, 355-356, 357A-357B, 357-358, 359A-359B, 359-360, 361, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370, 371, 372, 379A-379B, 379-380, 382, 384, 386, 387, 388

**Grade 3:** 3, 36A-36B, 36-39, 40A-40B, 40-41, 46, 47, 49, 51, 52, 53, 54, 55, 59, 190I, 190I, 190, 192A-192B, 192-195, 196A-196B, 196-197, 198A-198B, 198-199, 202, 203, 242, 243, 244, 246, 247, 250, 254, 358, 416, 426J, 464A-464B, 464-467, 468A-468B, 468-471, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478, 479, 480, 481, 483, 485, 486, 491, 495, 496J, 497, 501, 532A-532B, 532-533, 534A-534B, 534-535, 536A-536B, 536-537, 538A-538B, 538-539, 544, 545, 546, 547, 548, 549, 551, 552, 555, 556, 557, 560, 561, 562J, 563, 571, 582A-582B, 582-563, 584A-584B, 584-587, 588A-588B, 588-589, 590A-590B, 590-591, 592, 593, 594, 595, 597, 599, 600, 603, 604, 605, 607, 608, 668, 678I, 680A-680B, 680-683, 684A-684B, 684-685, 690A-690B, 690-693, 694A-694B, 694-695, 696A-698B, 696-697, 698, 699, 710A-710B, 710-711, 716, 717, 718, 719, 720, 722, 723, 724, 726, 727, 728, 737

**Grade 4:** 2J, 3, 30A-30B, 30-31, 32A-32B, 32-33, 42, 43, 48, 49, 50, 54, 58, 61, 188I, 190A-190B, 190-191, 192A-192B, 192-195, 196A-196B, 196-197, 198A-198B, 198-199, 200A-200B, 200-201, 202, 203, 240, 242, 243, 244, 246, 247, 250, 251, 432I, 464A-464B, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 478A-478B, 478-479, 480, 481, 482, 483, 485, 487, 488, 489, 493, 496, 497, 560J, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 596A-596B, 596-599, 602A-602B, 602-603, 604, 605, 607, 609, 610, 611, 612, 613, 616, 617, 620, 621, 622J, 622, 623, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 658A-658B, 658-661, 664A-664B, 664-665, 666A-666B, 666-667, 668, 669, 670, 671, 673, 674, 675, 676, 680, 681, 684, 685

**Approximation and Precision**

- **Understand that measurement is approximate.**
  - Grade K:** 131I, 131J, 135A-135B, 135-136, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 151A-151B, 151-152, 153A-153B, 153-154, 157, 158, 159J, 177A-177B, 177-178
  - Grade 2:** 289I, 297A-297B, 297-298, 307, 337, 339I, 341A-341B, 341-342, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 353A-353B, 353-354, 357A-357B, 357-358, 361, 363A-363B, 363-364, 365A-365B, 365-366, 367A-367B, 367-368, 371, 379A-379B, 379-380, 387
  - Grade 3:** 190I, 190, 192A-192B, 192-195, 196A-196B, 196-197, 198A-198B, 198-199, 200A-200B, 200-201, 202, 203, 242, 243, 244, 246, 247, 250, 254, 464A-464B, 464, 468A-468B, 468, 472A-472B, 473, 496J, 497, 532A-532B, 532, 533, 534A-534B, 534-535, 536A-536B, 536-537, 538A-538B, 538-539, 544, 545, 549, 551, 556, 557, 560, 561, 562J, 582A-582B, 582-583, 584A-584B, 584-587, 590A-590B, 590, 592, 593, 594, 585, 597, 599, 600, 604, 605, 608, 609, 628, 687I, 680A-680B, 681, 682, 684A-684B, 684-685, 690A-690B, 690-693, 694A-694B, 694-695, 696A-696B, 696-697, 718, 719, 720, 722, 723, 724, 726, 728, 729
  - Grade 4:** 190A-190B, 190-191, 192A-192B, 192-195, 196A-196B, 196-197, 200A-200B, 200-201, 202, 203, 240, 242, 243, 244, 246, 247, 250, 251, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 478A-478B, 478-479, 480, 481, 482, 483, 485, 487, 488, 489, 493, 496, 497, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 596A-596B, 596-599, 602A-602B, 602-603, 604, 605, 607, 609, 610, 611, 612, 613, 616, 617, 620, 621, 622, 623, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 658A-658B, 658-661, 664A-664B, 664-665, 666A-666B, 666-667, 668, 669, 670, 671, 673, 674, 675, 676, 680, 681, 684, 685
- **Know when to estimate and use estimation to determine when measurements are reasonable or to obtain approximations, for example, estimating the length of the playground by pacing it off.**
  - Grade K:** 131I, 131J, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158
  - Grade 1:** 203I, 203J, 221A-221B, 221-222, 231, 238, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381, 383A-383B, 383-384, 389A-389B, 389-390, 399, 412, 413, 414B, 414
  - Grade 2:** 289I, 297A-297B, 297-298, 307, 337, 339I, 341A-341B, 341-342, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 353A-353B, 353-354, 357A-357B, 357-358, 361, 363A-363B, 363-364, 365A-365B, 365-366, 367A-367B, 367-368, 371, 379A-379B, 379-380, 387

**Grade 3:** 190I, 190, 192A-192B, 192-195, 196A-196B, 196-197, 198A-198B, 198-199, 200A-200B, 200-201, 202, 203, 242, 243, 244, 246, 247, 250, 254, 464A-464B, 464, 468A-468B, 468, 472A-472B, 473, 496J, 497, 532A-532B, 532, 533, 534A-534B, 534-535, 536A-536B, 536-537, 538A-538B, 538-539, 544, 545, 549, 551, 556, 557, 560, 561, 562J, 582A-582B, 582-583, 584A-584B, 584-587, 590A-590B, 590, 592, 593, 594, 595, 597, 599, 600, 604, 605, 608, 609, 628, 678I, 680A-680B, 681, 682, 684A-684B, 684, 685, 690A-690B, 690-693, 694A-694B, 694-695, 696A-696B, 696-697, 718, 719, 720, 722, 723, 724, 726, 729, 728

**Grade 4:** 188I, 190A-190B, 190-191, 192A-192B, 192-195, 196A-196B, 196-197, 200A-200B, 200-201, 202, 203, 240, 242, 243, 244, 246, 247, 250, 251, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 478A-478B, 478-479, 480, 481, 482, 483, 485, 487, 488, 489, 493, 496, 497, 560J, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 596A-596B, 596-599, 600A-600B, 600-601, 602A-602B, 602-603, 604, 605, 607, 609, 610, 611, 612, 613, 616, 617, 620, 621, 622J, 622, 623, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 658A-658B, 658-661, 664A-664B, 664-665, 666A-666B, 666-667, 668, 669, 670, 671, 673, 674, 675, 676, 680, 681, 684, 685

### **Systems and Tools**

- **Understand the benefits of using standard units of measurement for measuring length, area, and volume.**

**Grade K:**

**Grade 1:** 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 377A-377B, 377-378, 381, 400, 409, 413, 414A

**Grade 2:** 339I, 351A-351B, 351-352, 361, 384, 387

**Grade 3:** 464A-464B, 464-467, 468A-468B, 471, 476A-476B, 476-477, 479, 485, 486, 491, 495, 496J, 532A-532B, 532-533, 534A-534B, 534-535, 538A-538B, 538-539, 544, 545, 546, 547, 549, 551, 552, 556, 557, 560, 561, 562J, 582A-582B, 582-583, 584A-584B, 584-587, 588A-588B, 588-589, 592, 593, 594, 595, 597, 599, 600, 604, 605, 608, 609

**Grade 4:** 464A-464B, 464-467, 468A-468B, 468-471, 476A-476B, 476-477, 480, 481, 485, 487, 488, 489, 493, 496, 497, 560J, 588A-588B, 588-589, 590A-590B, 590-591, 604, 605, 606, 607, 609, 610, 611, 612, 616, 620, 622J, 623, 652A-652B, 652-653, 669, 671, 673, 674, 675, 676, 680, 684

- **Understand appropriate units of measure for time, money, length, area, volume/capacity, weight/mass, and temperature.**

**Grade K:** 159J, 173A-173B, 173-174, 175A-175B, 175-176, 179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184, 187A-187B, 187-188, 191A-191B, 191, 192, 193



**Grade 1:** 203I, 203J, 204, 207A-207B, 207-208, 209A-209B, 209-210, 211A-211B, 211-212, 213-214, 215A-215B, 215-216, 217, 223A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229, 230, 232, 233, 234, 235, 236, 237, 238, 239, 329I, 329J, 330, 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 341, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 353A-353B, 353, 355, 356, 357, 358, 359, 361, 362, 371A-372B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 377A-377B, 377-378, 385A-385B, 385-386, 387A-387B, 387-388, 391A-391B, 391-392, 393A-393B, 393-394, 395A-395B, 395-396, 400, 413, 414, 414A, 414B

**Grade 2:** 79J, 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, 123A-123B, 123-124, 125, 127, 128, 130, 132, 289I, 291A-291B, 291-292, 293A-293B, 293-294, 295A-295B, 295-296, 299A-299B, 299-300, 301A-301B, 301-302, 306, 307, 318, 337, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 351A-351B, 351-352, 353A-353B, 353-354, 355A-355B, 355-356, 357A-357B, 357-358, 361, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370, 371, 372, 379A-379B, 379-380, 382, 384, 386, 387, 388

**Grade 3:** 190I, 192A-192B, 192-195, 200A-200B, 200-201, 242, 243, 244, 246, 247, 250, 254, 426J, 464A-464B, 465, 466, 467, 471, 496J, 532A-532B, 532-533, 534A-534B, 534-535, 536A-536B, 536-537, 538A-538B, 538-539, 544, 545, 546, 547, 549, 551, 552, 556, 557, 560, 561, 562J, 582A-582B, 582-583, 584A-584B, 584-587, 593, 594, 595, 597, 599, 600, 604, 605, 608, 609, 678I, 680A-680B, 680-683, 684A-684B, 684-687, 690A-690B, 690-693, 694A-694B, 694-695, 696A-696B, 696-697, 698, 717, 718, 720, 724, 728, 737

**Grade 4:** 2J, 3, 30A-30B, 30-31, 32A-32B, 32-33, 42, 43, 48, 49, 50, 54, 58, 61, 188I, 190A-190B, 190-191, 192A-192B, 192-195, 196A-196B, 196-197, 198A-198B, 198-199, 200A-200B, 200-201, 202, 203, 240, 242, 243, 244, 246, 247, 250, 251, 464A-464B, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 478A-478B, 478-479, 480, 481, 482, 483, 485, 487, 488, 489, 493, 496, 497, 560J, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 596A-596B, 596-599, 602A-602B, 602-603, 604, 605, 607, 609, 610, 611, 612, 613, 616, 617, 620, 621, 622J, 622, 623, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 658A-658B, 658-661, 664A-664B, 664-665, 666A-666B, 666-667, 668, 669, 670, 671, 673, 674, 675, 676, 680, 681, 684, 685

- **Select and use appropriate tools for measuring time, money, length, area, volume, mass, and temperature.**

**Grade K:** 159J, 173A-173B, 173-174, 175A-175B, 175-176, 179A-179B, 179-180, 181A-181B, 181-182, 183A-183B, 183-184, 187A-187B, 187-188, 191A-191B, 191, 192, 193

**Grade 1:** 203I, 203J, 204, 207A-207B, 207-208, 209A-209B, 209-210, 211A-211B, 211-212, 213-214, 215A-215B, 215-216, 217, 223A-223B, 223-224, 229A-

229B, 229, 230, 232, 233, 234, 235, 236, 237, 238, 238A, 329I, 329J, 330, 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 341, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 353A-353B, 353, 355, 356, 357, 358, 359, 361, 362, 371A-372B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 377A-377B, 377-378, 381, 385A-385B, 385-386, 387A-387B, 387-388, 391A-391B, 391-392, 395A-395B, 395-396, 400, 411, 412, 413, 414, 414A

**Grade 2:** 79J, 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, 123A-123B, 123-124, 125, 127, 128, 130, 132, 289I, 291A-291B, 291-292, 293A-293B, 293-294, 295A-295B, 295-296, 299A-299B, 299-300, 303A-303B, 303-304, 306, 307, 318, 337, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 351A-351B, 351-352, 353A-353B, 353-354, 355A-355B, 355-356, 357A-357B, 357-358, 359A-359B, 359-360, 361, 362, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370, 371, 372, 379A-379B, 379-380, 382, 384, 386, 387, 388

**Grade 3:** 3, 36A-36B, 36-39, 41, 45, 47, 49, 51, 52, 54, 59, 190, 190I, 192A-192B, 192-195, 200A-200B, 200-201, 242, 243, 244, 246, 247, 250, 254, 464A-464B, 467, 496J, 532A-532B, 532-533, 534A-534B, 534-535, 536A-536B, 536-537, 544, 545, 549, 551, 556, 557, 560, 561, 562J, 563, 582A-582B, 582-583, 584A-584B, 584-587, 597, 604, 608, 678I, 680A-680B, 680-683, 684A-684B, 684-685, 690A-690B, 690, 694A-694B, 694, 696A-696B, 696-697, 698, 717, 718, 720, 724, 728, 737

**Grade 4:** 2J, 30A-30B, 30-31, 188I, 190A-190B, 190-191, 195, 197, 202, 203, 242, 243, 244, 246, 250, 464A-464B, 464-467, 468A-468B, 468-471, 476A-476B, 476-477, 560J, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 604, 605, 609, 610, 612, 616, 620, 622J, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 658A-658B, 658-661, 664A-664B, 664-665, 669, 673

### 1.3 Understand and apply concepts and procedures from geometric sense.

#### Properties and Relationships.

- Use attributes of geometric shapes and properties of parallel and perpendicular to identify, name, compare, and sort geometric shapes and figures.

**Grade K:** 1J, 15A-15B, 15-16, 17A-17B, 17-18, 19A-19B, 19-20, 24, 39A-39B, 39-40, 195I, 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202, 203A-203B, 203-204, 205A-205B, 205-206, 219A-219B, 221

**Grade 1:** 155I, 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 163, 165A-165B, 165-166, 167A-167B, 167-168, 202

**Grade 2:** 245I, 246, 249A-249B, 249-250, 253, 255A-255B, 255-256, 264, 265A-265B, 265-266, 267, 282, 284, 287, 288

**Grade 3:** 426I, 426, 427, 428A-428B, 428-431, 432A-432B, 432-435, 440, 441, 442A-442B, 442-443, 446A-446B, 446-449, 450A-450B, 450-453, 454A-454B, 454-455, 462, 463, 482, 484, 485, 486, 488, 489, 490, 492, 493, 494, 668, 720

**Grade 4:** 432I, 432, 434A-434B, 434-437, 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449, 450, 451, 484, 486, 490, 491, 492, 494, 495

- **Recognize geometric shapes in the surrounding environment, *for example, identify rectangles within windows.***

**Grade K:** 197A-197B, 197-198, 199A-199B, 199, 200, 219A-219B, 219, 221

**Grade 1:** 157, 162, 165, 180, 193, 194

**Grade 2:** 7B-7F, 245, 247, 248, 253

**Grade 3:** 426, 428A-428B, 428, 429, 430, 432A-432B, 433, 440, 441, 446A-446B, 446, 448, 450A-450B, 450, 452, 453, 454A-454B, 454, 460A-460B, 460, 461, 476A-476B, 476-477, 484, 488, 492

**Grade 4:** 432, 434A-434B, 436, 440A-440B, 442, 443, 444A-444B, 446, 447, 448A-448B, 449, 451, 452A-452B, 453, 460A-460B, 460, 461, 464A-464B, 467, 468A-468B, 470, 472, 473, 476A-476B, 477, 578-479

- **Understand concepts of symmetry, congruence, and similarity.**

**Grade K:** 195J, 207A-207B, 207-208, 211A-211B, 211-212, 222

**Grade 1:** 169A-169B, 169-170, 171A-171B, 171-172, 173A-173B, 173-174, 179, 202

**Grade 2:** 257A-257B, 257-258, 259A-259B, 259-260, 261A-261B, 261-262, 266, 267, 286, 287

**Grade 3:** 456A-456B, 456-459, 460A-460B, 460-461, 462, 463, 476A-476B, 477, 478, 481, 483, 484, 485, 490, 494

**Grade 4:** 452A-452B, 452-455, 456A-456B, 456-457, 458A-458B, 458-459, 462, 463, 485, 486, 487, 488, 491, 492, 485, 496

- **Draw and build simple shapes and figures using appropriate tools, *such as a straightedge, ruler, protractor, or nets.***

**Grade K:** 195I, 207A-207B, 207-208, 209A-209B, 209-210

**Grade 1:** 166A-166B, 166, 169A-169B, 170, 173A-173B, 173, 198

**Grade 2:** 245I, 251A-251B, 251-252, 255A-255B, 255-256, 261A-261B, 261-262, 264, 267, 284, 286, 287

**Grade 3:** 426I, 428A-428B, 431, 432A-432B, 432, 446A-446B, 446-449, 450A-450B, 450-453, 455, 456A-456B, 456-459, 460A-460B, 460-461, 462, 463, 464A-464B, 465, 466, 468A-468B, 469, 470, 471, 473, 476A-476B, 477, 478, 479

**Grade 4:** 432I, 434A-434B, 435, 437, 438A-438B, 439, 440A-440B, 441, 442, 444A-444B, 444, 445, 447, 448A-448B, 448, 451, 452A-452B, 452, 454, 455, 456A-456B, 456, 457, 458A-458B, 459, 464A-464B, 464, 468A-468B, 468, 470, 471, 474A-474B, 474, 475, 494

### **Locations and transformations**

- **Locate and describe the location of objects on a number line, map, or a coordinate grid in the first quadrant.**

**Grade K:** 91A-91B, 91-91, 141B

**Grade 1:** 4B-4C, 4D-4E, 4F, 97A-97B, 97-98, 101, 121, 124, 125A-125B, 125-126, 135, 148, 151, 153, 154B, 299A-299B, 299-300, 305, 315A-315B, 315-316, 321, 323, 328, 317A-317B, 317-318, 321, 328

**Grade 2:** 61A-61B, 61, 62, 95A-95B, 95-96, 107, 131, 229A-229B, 229, 323A-323B, 323, 324, 325A-325B, 325-326, 331, 338, 338A, 419

**Grade 3:** 18A-18B, 18, 20, 23, 208A-208B, 208-210, 218A-218B, 218-221, 224, 225, 244, 245, 246, 247, 251, 252, 255, 256, 257, 487, 496B, 496E, 496G, 496H, 512A-512B, 512-513, 514, 515, 517, 548, 550, 555, 559

**Grade 4:** 4A-4B, 4, 6, 15, 16A-16B, 16, 18, 20A-20B, 20, 188J, 206A-206B, 206-207, 212A-212B, 212-215, 224, 225, 239, 240, 241, 243, 245, 247, 248, 251, 252, 504A-504B, 505, 506, 507, 508A-508B, 509, 515, 524A-524B, 525, 534A-534B, 534, 535, 538A-538B, 539, 546, 550, 552, 556, 628A-628B, 628, 630A-630B, 630, 632A-632B, 632, 683, 688A-688B, 688-689, 722, 724, 725, 728

- **Understand and draw simple geometric transformations using translations (slides), reflections (flips), or rotations (turns).**

**Grade K:** 195J, 207A-207B, 207-208, 222,

**Grade 1:** 173A-173B, 173-174, 179, 202

**Grade 2:** 259A-259B, 259-260, 267, 287

**Grade 3:** 456A-456B, 456-459, 462, 463, 481, 483, 485, 490, 494

**Grade 4:** 452A-452B, 452-455, 462, 463, 485, 486, 491, 495

## 1.4 Understand and apply concepts and procedures from probability and statistics.

### Probability

- **Understand the difference between a certain and uncertain event.**
  - Grade K:** 125A-1254B, 125-126, 130
  - Grade 1:** 401A-401B, 401-402, 407, 414B
  - Grade 2:** 339J, 373A-373B, 373-374, 375A-375B, 375-376, 381, 388
  - Grade 3:** 700A-700B, 700-701, 712, 717, 724, 728
  - Grade 4:** 700A-700B, 700-703, 718, 719, 723, 724, 727, 729, 732
- **Know how to list all possible outcomes of simple experiments.**
  - Grade K:** 125A-1254B, 125-126, 130
  - Grade 1:** 363J, 364, 403A-403B, 403-404, 407
  - Grade 2:** 338J, 340, 373A-373B, 373, 375A-375B, 375, 381
  - Grade 3:** 678J, 700A, 700B, 702A, 702B, 702, 704A, 704B, 708A, 708B
  - Grade 4:** 686J, 704A-704B, 704-705, 706A-706B, 706, 707, 718, 719, 723, 729, 732
- **Understand and use experiments to investigate the probabilities of uncertain events.**
  - Grade K:** 125A-1254B, 125-126, 130
  - Grade 1:** 363J, 401A-401B, 401-402, 403A-403B, 403-404, 407
  - Grade 2:** 38, 242, 284, 313A-313B, 313, 319A-319B, 319, 321A-321B, 322, 334, 336, 339J, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 353A-353B, 353, 363A-363B, 363, 386, 373A-373B, 373, 375A-375B, 375, 381, 437A-437B, 438
  - Grade 3:** 678J, 700A-700B, 700-701, 712, 713, 717, 719, 724, 728
  - Grade 4:** 686J, 700A-700B, 701, 703, 704B, 706B, 709, 710A, 710B

### Statistics

- **Collect data in an organized way.**
  - Grade K:** 33A-33B, 33-34, 125A-1254B, 125-126, 130, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 159J
  - Grade 1:** 177A-177B, 177-178, 203I, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413

**Grade 2:** 38, 209J, 242, 284, 289J, 313A-313B, 313, 319A-319B, 319, 321A-321B, 322, 334, 336, 339J, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 353A-353B, 353, 363A-363B, 363, 386, 373A-373B, 373, 375A-375B, 375, 381  
437A-437B, 438

**Grade 3:** 190J, 204A-204B, 205, 206, 207, 208A, 208B, 212A, 212B, 216A, 222A, 226A, 226B, 226, 228A, 228B, 229, 230, 231, 232A, 232B, 232, 233, 236A, 236B, 236, 237, 240, 243, 247, 253, 270A, 270B, 271, 272, 274, 275, 299, 300, 303, 305, 307, 311, 312, 313, 359, 363, 367, 678J, 700B, 702A, 702B, 702, 704A, 704B, 708A,

**Grade 4:** 188J, 204B, 206A, 206B, 208A, 208B, 211, 212B, 222B, 226A, 226B, 230A-230B, 230-231, 536A, 588A, 588B, 588, 590B, 591, 592A, 592B, 592, 594A, 594B, 594, 622J, 652A, 652B, 652, 654A, 654B, 656A, 656B, 656, 664A, 686I, 686J, 700B, 701, 704A, 704B, 706B, 709, 710A

- **Organize and display data in numerical and graphical forms *such as tables, charts, pictographs, and bar graphs.***

**Grade K:** 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34, 49, 67A-67B, 67-68, 125A-125B, 125-126, 130, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 233A-233B, 233-234,

**Grade 1:** 177A-177B, 177-178, 203I, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413

**Grade 2:** 38, 89A-89B, 89-90, 242, 284, 289J, 311A-311B, 311-312, 313A-313B, 313-314, 319A-319B, 319, 321A-321B, 322, 334, 336, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 353A-353B, 353, 363A-363B, 363, 368, 373A-373B, 373, 375A-375B, 375, 381, 439A-439B, 439-440  
437A-437B, 438

**Grade 3:** 2I, 190J, 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 216A, 222A-222B, 222-223, 224, 225, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 240, 241, 243, 245, 246, 247, 249, 251, 252, 253, 255, 256, 257, 258J, 270A-270B, 270-273, 274, 275, 291, 303, 305, 307, 311, 312, 314J, 357, 359, 363, 367, 678J, 702

**Grade 4:** 2J, 188J, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-215, 216A-216B, 216-219, 222A-222B, 222-223, 224, 225, 230A-230B, 230-231, 235, 243, 252, 253, 536A, 536B, 536-537, 588A, 592A, 592, 594A, 594, 598, 652, 654B, 654, 656, 658A, 686I, 704A, 704B, 704, 705,

- **Understand measures of central tendency, such as mean, median, and mode in describing data.**
  - Grade K:** Teaching toward this objective begins at Grade 2
  - Grade 1:** Teaching toward this objective begins at Grade 2
  - Grade 2:** 333
  - Grade 3:** 208A, 208B, 208, 209, 210, 211, 225, 245, 247, 251, 255, 305, 487, 553, 601, 621
  - Grade 4:** 226A-226B, 226-229, 231, 236, 237, 242, 243, 249, 253, 404A-404B, 404-405, 407, 411, 412, 414, 419, 420, 423, 427, 431
- **Identify how data can be used to support a point of view.**
  - Grade K:** 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34, 47, 49, 67A-67B, 67-68, 74, 125A-1254B, 125-126, 130, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158
  - Grade 1:** 203I, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413
  - Grade 2:** 38, 89A-89B, 89-90, 242, 284, 289J, 311A-311B, 311-312, 313A-313B, 313-314, 319A-319B, 319, 321A-321B, 322, 334, 336, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 353A-353B, 353, 363A-363B, 363, 368, 373A-373B, 373, 375A-375B, 375, 381, 439A-439B, 439-440, 437A-437B, 438
  - Grade 3:** 190J, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 240, 241, 247, 255, 256, 257, 270A-270B, 270-273, 274, 275, 291, 303, 305, 307, 311, 312, 357, 359, 363, 367, 678J, 708A
  - Grade 4:** 188J, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-215, 216A-216B, 216-221, 222A-222B, 222-223, 224, 225, 230A-230B, 230-231, 236, 237, 241, 242, 243, 245, 247, 248, 249, 251, 252, 253, 254, 536A-536B, 536-537, 541, 542, 543, 546, 549, 551, 555, 559

### **Prediction and Inference**

- **Predict outcomes of simple activities and compare predictions to experimental results.**
  - Grade K:** 125A-1254B, 125-126, 130, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158
  - Grade 1:** 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413
  - Grade 2:** 245I, 339J, 340, 373A-373B, 373-374, 375A-375B, 375-376, 381, 388

**Grade 3:** 678J, 700A-700B, 700-701, 702A-702B, 702-703, 704A-704B, 704-707, 708A-708B, 708-709, 712, 713, 719, 725, 729

**Grade 4:** 686J, 710A-710B, 710-711, 718, 719, 720, 711, 723, 724, 727, 730, 733

- **Understand and make inferences based on experimental results using coins, number cubes, spinners, etc.**

**Grade K:** 125A-1254B, 125-126, 130

**Grade 1:** 363J, 364, 403A-403B, 403

**Grade 2:** 339J, 340, 373A-373B, 373-374, 375A-375B, 375-376, 381, 388

**Grade 3:** 678J, 700A, 700B, 700, 701, 702A, 702B, 702, 703, 704A, 704B, 704, 705, 706, 707, 708A-708B, 708-709, 712, 713, 714, 715, 717, 718, 719, 721, 725, 728, 729

**Grade 4:** 686J, 700A-700B, 700-703, 704A-704B, 704-705, 706A-706B, 706-709, 710A-710B, 710-711, 718, 719, 720, 721, 723, 724, 725, 727, 729, 730, 732, 733

## 1.5 Understand and apply concepts and procedures from algebraic sense.

### Patterns

- **Recognize, extend, and create patterns of numbers, shapes, or objects *such as beans, toothpicks, pattern blocks, cubes, and colored tiles.***

**Grade K:** 25J, 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 48, 50, 95A-95B, 95-96, 100, 101J, 113A-113B, 113-114, 285J, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298, 302

**Grade 1:** 1I, 3A-3B, 3-4, 5A-5B, 5-6, 9, 10, 24, 33A-33B, 33-34, 36, 37, 41, 54, 74, 88A, 154A, 166, 193A-193B, 194, 210, 239, 245A-245B, 245-246, 253, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261, 271, 273, 274, 275, 278, 302

**Grade 2:** 1I, 133J, 411-412, 413A-413B, 413-414, 420, 424, 451, 467A-467B, 467-468, 481, 497

**Grade 3:** 24A-24B, 24-34, 34, 51, 52, 54, 55, 58, 64A, 110, 112, 113, 115, 72A-72B, 72-73, 110, 112, 113, 115, 116, 120, 180, 249, 258J, 270A-270B, 270-273, 274, 275, 276B, 277, 279, 280A, 280B, 280, 281, 282A, 282, 286B, 286, 288A-288B, 288-289, 291, 293, 296, 297, 299, 300, 301, 303, 305, 307, 311, 313, 314J, 315, 332A-332B, 332-335, 340A-340B, 340-341, 344A-344B, 344-345, 350, 351, 352, 353, 354, 356, 357, 359, 361, 363, 365, 366, 367, 386B, 386, 402A, 402B, 402-403, 417, 421, 424, 425, 553, 618A-618B, 618-621, 624, 664, 669, 670, 674, 680B, 680, 684B, 685, 695, 721



**Grade 4:** 10A-10B, 10-11, 14, 15, 48, 56, 90A-90B, 90-91, 92, 93, 97, 109, 110, 111, 113, 116, 120, 122, 128A-128B, 128-131, 140A-140B, 140-143, 144, 164A-164B, 164-165, 167, 170, 171, 172, 173, 175, 177, 179, 181, 183, 185, 186, 187, 256A-256B, 256-257, 268, 269, 297, 303, 304, 308, 314A-314B, 314-315, 330, 331, 355, 356, 360, 366A-366B, 366-367, 378, 379, 406A-406B, 406-407, 414, 415, 418, 420, 421, 423, 424, 427, 428, 431, 641, 686I, 692A-692B, 692-695, 698, 699, 722, 724, 727, 728, 731

- **Write a rule for a pattern based on a single arithmetic operation between terms such as a function machine.**

**Grade K:** Prerequisite concept: 297A-297B, 297-298

**Grade 1:** Prerequisite concept: 261A-261B, 261-262

**Grade 2:** 167, 411-412, 413A-413B, 413-414, 420, 424

**Grade 3:** 72A-72B, 72-75, 78, 79, 110, 113, 115, 116, 120, 305, 315, 344A-344B, 344-345, 350, 352, 353, 354, 356, 357, 359, 363, 367, 417, 553, 669

**Grade 4:** 90A-90B, 90-91, 92, 93, 97, 105, 111, 113, 116, 120, 122, 140A-140B, 140-143, 144, 164A-164B, 164-165, 167, 170, 171, 172, 173, 175, 177, 179, 181, 183, 185, 186, 187

### Representations

- **Understand equality and inequality and use =, >, and < in number sentences.**

**Grade K:** 253A-253B, 253-254, 255A-255B, 255-256, 247A-257B, 257-258, 259A-259B, 259-260, 262, 273A-273B, 273-274, 279A-279B, 279-280, 281A-281B, 281-282, 284

**Grade 1:** 43, 49A-49B, 49-50, 51A-51B, 51-52, 57A-57B, 57-58, 59, 65A-65B, 65-66, 67A-67B, 67-68, 73, 77A-77B, 77-78, 79A-79B, 79-80, 81, 87, 88, 88B, 133A-133B, 133-134, 297A-297B, 297-298, 305, 327

**Grade 2:** 1I, 1J, 9A-9B, 9-10, 11, 19A-19B, 19-20, 21, 24, 28, 39, 40, 41J, 57A-57B, 57-58, 91A-91B, 91-92, 93, 115A-115B, 115-116, 125, 131, 172B, 202, 203, 221A-221B, 221-222, 223, 243, 330, 399A-399B, 399-400, 403, 424, 424A, 465I, 465J, 485A-485B, 485-486, 498

**Grade 3:** 74-75, 76A-76B, 76-77, 78, 79, 111, 112, 115, 117, 121, 168A-168B, 168-169, 172, 173, 177, 178, 179, 181, 185, 189, 669, 721

**Grade 4:** 100A-100B, 100-101, 104, 105, 109, 111, 113, 117, 121, 123, 166A-166B, 166-167, 170, 171, 175, 177, 179, 183, 187, 688A-688B, 688-689, 690A-690B, 690-691, 692-695, 698, 699, 724, 725, 728, 731

- **Identify and use appropriate symbols and notations in reading and writing open sentences; for example,  $3 \times \square = 18$ .**

**Grade K:** Prerequisite concepts: 253A-253B, 253-254, 255A-255B, 255-256, 257A-257B, 257-258, 259A-259B, 259-260, 262, 263I, 273A-273B, 273-274, 279A-279B, 279-280, 281A-281B, 281-282, 284

**Grade 1:** 83, 91A-91B, 91-92, 95A-95B, 95-96, 97A-97B, 97, 98, 115, 121, 122, 125A-125B, 125, 127A-127B, 127, 129A-129B, 129, 135, 136, 141A-141B, 141-142, 145, 147, 148, 151, 153, 154A, 154B, 419A-419B, 419-420, 421A-421B, 421-422, 433, 435A-435B, 435, 437A-437B, 437, 439A-439B, 439, 440, 453, 455, 456, 459A-459B, 460, 465A-465B, 465, 466, 477A-477B, 477-478, 492

**Grade 2:** 25A-5B, 25-26, 29A-29B, 29-30, 33, 34, 40, 43A-43B, 43-44, 45A-45B, 46, 47A-47B, 48, 49A-49B, 50, 51A-51B, 52, 53A-53B, 54, 59, 61A-61B, 62, 63A-63B, 63-64, 65A-65B, 65-66, 67A-67B, 67-68, 71, 72, 77, 78, 78A, 78B, 94, 108, 126, 137A-137B, 137-138, 147A-147B, 148, 166, 172A, 193A-193B, 194, 203, 228, 338A, 338B, 397A-397B, 397, 398, 401A-401B, 401-402, 403, 423, 427A-427B, 428, 431A-431B, 431-432, 441, 443A-443B, 443-444, 447A-447B, 447-448, 457, 463, 464, 475A-475B, 475, 493

**Grade 3:** 74-75, 76A-76B, 76-77, 78, 79, 111, 112, 115, 117, 121, 168A-168B, 168-169, 172, 173, 177, 178, 179, 181, 185, 189, 669, 721

**Grade 4:** 100A-100B, 100-101, 104, 105, 109, 111, 113, 117, 121, 123, 166A-166B, 166-167, 170, 171, 175, 177, 179, 183, 187, 688A-688B, 688-689, 690A-690B, 690-691, 692-695, 698, 699, 724, 725, 728, 731

### Operations

- **Evaluate simple expressions using blocks, sticks, beans, pictures, etc.**

**Grade K:** 251A-251B, 251-252, 271A-271B, 271-272

**Grade 1:** 89I, 149, 457I, 457J

**Grade 2:** 35, 41I, 133J, 173I, 181A-181B, 181-182, 183, 184, 209I, 217A-217B, 217-218, 238, 435A-435B, 435-436, 441, 451A-451B, 451, 452-452, 457, 464

**Grade 3:** 66A-66B, 67, 68, 80A-80B, 80-81, 82A-82B, 82-85, 94A-94B, 94-95, 96A-96B, 96-97, 128A-128B, 128-131, 132A-132B, 132-134, 136A-136B, 136-137, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 162A-162B, 162-165, 166A-166B, 167, 258J, 262A-262B, 262, 276A-276B, 277, 280A-280B, 280, 281, 282A-282B, 282, 283, 286A-286B, 286, 287, 288A-288B, 288, 289, 292A-292B, 293, 314I, 314J, 320A-320B, 320, 321, 324A-324B, 324, 325, 328A-328B, 328, 329, 340A-340B, 340, 341, 342A-342B, 342-343, 374A-374B, 375, 386A-386B, 386, 387, 388A-388B, 388, 389, 390A-390B, 390, 391, 392A-392B, 392, 393, 396A-396B, 397, 398A-398B, 399, 402A-402B, 402, 403, 572A-572B, 572, 573, 610I, 612A-612B, 613, 618A-618B, 618, 619, 626A-626B, 626, 627, 630A-630B, 630, 631, 632A-632B, 632, 633, 636A-636B, 636, 637, 638A-638B, 639, 640A-640B, 641, 648A-648B, 648, 649, 650A-650B, 650, 651, 652A-652B, 652, 653

**Grade 4:** 60J, 62A-62B, 62-63, 64A-64B, 64-67, 76A-76B, 76, 77, 78, 82A-82B, 82, 83, 84, 98A-98B, 98-99, 101, 104, 109, 111, 117, 121, 123, 132A-132B, 132, 133, 134, 136A-136B, 137, 150A-150B, 150, 151, 152A-152B, 152, 153, 160A-160B, 160-163, 165, 167, 170, 171, 175, 176, 177, 179, 183, 187, 191, 245, 256A-256B, 256, 257, 261, 262A-262B, 262, 263, 270A-270B, 270, 272, 274A-274B, 275, 281, 288A-288B, 288, 289, 314A-314B, 314, 315, 335, 337, 366A-366B, 366-367, 372A-372B, 372, 373, 374A-374B, 374, 375, 380A-380B, 380, 381, 386A-386B, 386, 387, 390A-390B, 390, 391, 406A-406B, 406-407, 408A-408B, 408, 410, 423, 677

- **Solve simple equations using blocks, sticks, beans, pictures, etc.**

**Grade K:** 253A-253B, 253-254, 255A-255B, 255-256, 247A-257B, 257-258, 259A-259B, 259-260, 262, 263I, 273A-273B, 273-274, 279A-279B, 279-280, 281A-281B, 281-282, 284

**Grade 1:** 83, 91A-91B, 91-92, 95A-95B, 95-96, 97A-97B, 97, 98, 115, 121, 122, 125A-125B, 125, 127A-127B, 127, 129A-129B, 129, 135, 136, 141A-141B, 141-142, 145, 147, 148, 151, 153, 154A, 154B, 419A-419B, 419-420, 421A-421B, 421-422, 433, 435A-435B, 435, 437A-437B, 437, 439A-439B, 439, 440, 453, 455, 456, 459A-459B, 460, 465A-465B, 465, 466, 477A-477B, 477-478, 492

**Grade 2:** 9A-9B, 9-10, 11, 17A-17B, 17-18, 25A-25B, 25, 26, 29A-29B, 29-30, 33, 40, 45A-45B, 46, 47A-47B, 48, 51A-51B, 52, 53A-53B, 54, 57A-57B, 57-58, 61A-61B, 62, 63A-63B, 63, 64, 65A-65B, 65, 66, 67A-67B, 67, 68, 70, 71, 72, 76, 78A, 78B, 137A-137B, 137, 138, 143, 147A-147B, 148, 151, 171, 172, 172A, 175A-175B, 175-176, 193A-193B, 193, 194, 211A-211B, 211-212, 221A-221B, 221-222, 243, 244A, 431A-431B, 431-432, 441, 447A-447B, 447-448, 463, 471A-471B, 471, 473A-473B, 474, 475A-475B, 475, 479A-479B, 479-480, 481, 485A-485B, 485-486, 491, 493, 496, 497, 498

**Grade 3:** 67, 68, 73, 76A-76B, 76-77, 78, 79, 108, 109, 111, 112, 113, 115, 116, 117, 120, 121, 123, 168A-168B, 168-169, 172, 173, 177, 178, 179, 181, 185, 189, 195, 249, 264, 286, 287, 305, 306, 310, 313, 316, 318, 359, 385, 387, 395, 409, 415, 417, 419, 423, 439, 487, 669, 721

**Grade 4:** 100A-100B, 100-101, 104, 105, 109, 111, 113, 117, 121, 131, 166A-166B, 166-167, 170, 171, 175, 177, 179, 193, 187, 191, 195, 245, 303, 423, 551

**2. The student uses mathematics to define and solve problems.**

*To meet this standard, the student will:*

**2.1 Investigate situations****• Search for patterns in simple situations.**

**Grade K:** 25J, 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 48, 50, 95A-95B, 95-96, 100, 101J, 113A-113B, 113-114, 285J, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298, 302

**Grade 1:** 1I, 3A-3B, 3-4, 5A-5B, 5-6, 9, 10, 24, 33A-33B, 33-34, 36, 37, 41, 54, 74, 88A, 154A, 166, 193A-193B, 194, 210, 239, 245A-245B, 245-246, 253, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261, 271, 273, 274, 275, 278, 279J, 302

**Grade 2:** 1I, 79I, 99A-99B, 99-100, 107, 132, 133J, 167, 408, 411, 412, 413A-413B, 413-414, 420, 424, 465J

**Grade 3:** 24A-24B, 24-34, 34, 51, 52, 54, 55, 58, 64A, 110, 112, 113, 115, 72A-72B, 72-73, 110, 112, 113, 115, 116, 120, 180, 249, 258J, 270A-270B, 270-273, 274, 275, 276B, 277, 279, 280A, 280B, 280, 281, 282A, 282, 286B, 286, 288A-288B, 288-289, 291, 293, 296, 297, 299, 300, 301, 303, 305, 307, 311, 313, 314J, 315, 332A-332B, 332-335, 340A-340B, 340-341, 344A-344B, 344-345, 350, 351, 352, 353, 354, 356, 357, 359, 361, 363, 365, 366, 367, 386B, 386, 402A, 402B, 402-403, 417, 421, 424, 425, 553, 618A-618B, 618-621, 624, 664, 669, 670, 674, 680B, 680, 684B, 685, 695, 721

**Grade 4:** 10A-10B, 10-11, 14, 15, 48, 56, 60J, 90A-90B, 90-91, 92, 93, 97, 109, 110, 111, 113, 116, 120, 122I, 122, 128A-128B, 128-131, 140A-140B, 140-143, 144, 164A-164B, 164-165, 167, 170, 171, 172, 173, 175, 177, 179, 181, 183, 185, 186, 187, 256A-256B, 256-257, 268, 269, 297, 303, 304, 308, 314A-314B, 314-315, 330, 331, 355, 356, 360, 366A-366B, 366-367, 378, 379, 406A-406B, 406-407, 414, 415, 418, 420, 421, 423, 424, 427, 428, 431, 641, 686I, 692A-692B, 692-695, 698, 699722, 724, 727, 728, 731

**• Use a variety of strategies and approaches.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 311A-311B, 311-312, 327A-327B, 327-328, 329A-329B, 329-330, 335, 351A-351B, 351-352, 377A-377B, 377-378, 379A-379B, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 32A-32B, 32-33, 44A-44B, 44-45, 76A-76B, 76-77, 104A-104B, 104-105, 140A-140B, 140-143, 170A-170B, 170-171, 236A-236B, 236-237, 238A-238B, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294A-294B, 294-295, 332A-332B, 332-335, 3348A-349B, 348-349, 380A-380B, 380-381, 406A-406B, 406-407, 436A-436B, 436-439, 476A-476B, 476-477, 528A-528B, 528-529, 542A-542B, 542-543, 578A-578B, 578-579, 590A-590B, 644A-644B, 644-645, 658A-658B, 658-659, 688A-688B, 688-689, 710A-710B, 710-711

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40A-40B, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102A-102B, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168A-168B, 168-169, 222A-222B, 222-223, 234A-234B, 234-235, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 326A-326B, 326-327, 344A-344B, 344-345, 396A-396B, 396-397, 412A-412B, 412-413, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 540A-540B, 540-541, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 648A-648B, 648-649, 666A-666B, 666-667, 714A-714B, 714-715, 716A-716B, 716-717

- **Recognize when information is missing or extraneous.**

**Grade K:** Teaching toward this objective begins at Grade 1.

**Grade 1:** 99A-99B 99-100, 101, 122

**Grade 2:** 233A-233B, 233-234, 237, 244, 244B

**Grade 3:** 14, 540A-540B, 540-541, 544, 549, 551, 557, 561

**Grade 4:** 696A-696B, 696-697, 698, 699, 703, 723, 725, 729, 732

- **Recognize when an approach is unproductive and try a new approach.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, -67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 311A-311B, 311-312, 327A-327B, 327-328, 329A-329B, 329-330, 351A-351B, 351-352, 377A-377B, 377-378, 379A-379B, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 32A-32B, 32-33, 44A-44B, 44-45, 76A-76B, 76-77, 104A-104B, 104-105, 140A-140B, 140-143, 170A-170B, 170-171, 236A-236B, 236-237, 238A-238B, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294A-294B, 294-295, 332A-332B, 332-335, 3348A-349B, 348-349, 380A-380B, 380-381, 406A-406B, 406-407, 436A-436B, 436-439, 476A-476B, 476-477, 528A-528B, 528-529, 542A-542B, 542-543, 578A-578B, 578-579, 590A-590B, 644A-644B, 644-645, 658A-658B, 658-659, 688A-688B, 688-689, 710A-710B, 710-711

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40A-40B, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102A-102B, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168A-168B, 168-169, 222A-222B, 222-223, 234A-234B, 234-235, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 326A-326B, 326-327, 344A-344B, 344-345, 396A-396B, 396-307, 412A-412B, 412-413, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 540A-540B, 540-541, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 648A-648B, 648-649, 666A-666B, 666-667, 714A-714B, 714-715, 716A-716B, 716-717

## 2.2 Formulate questions and define the problem

- **Identify questions to be answered in familiar situations.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 21A-21B, 21-22, 57A-57B, 57-58, 111A-111B, 111-112, 133A-133B, 133-134, 177A-177B, 177-177, 215A-215B, 215-216, 261A-261B, 261-262, 291A-291B, 291-292, 351A-351B, 351-352, 369A-369B, 369-370, 431A-431B, 431-432, 467A-467B, 467-468, 481A-481B, 481-482

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 37, 57A-57B, 57-58, 89A-89B, 89-90, 129, 155A-155B, 155-156, 197A-197B, 197-198, 221A-221B, 221-222, 241, 265A-265B, 265-266, 289J, 311A-311B, 311-312, 313A-313B, 313-314, 351A-351B, 351-352, 377A-377B, 377-378, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 461, 479A-479B, 479-480

**Grade 3:** 14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 76A-76B, 76-77, 140A-140B, 140-141, 160A-160B, 160-161, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-335, 346A-346B, 346-347, 380A-380B, 380-381, 436A-436B, 436-439, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 644A-644B, 644-645, 656A-656B, 656-657, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 140A-140B, 140-141, 156A-156B, 156-157, 222A-222B, 222-223, 278A-278B, 278-279, 290A-290B, 290-291, 326A-326B, 326-327, 384A-384B, 384-385, 396A-396B, 396-397, 474A-474B, 474-465, 512A-512B, 512-513, 584A-584B, 584-585, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

- **Define problems in familiar situations.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 21A-21B, 21-22, 57A-57B, 57-58, 111A-111B, 111-112, 133A-133B, 133-134, 177A-177B, 177-178, 215A-215B, 215-216, 261A-261B, 261-262,

291A-291B, 291-292, 351A-351B, 351-352, 369A-369B, 369-370, 431A-431B, 431-432, 467A-467B, 467-468, 481A-481B, 481-482

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 37, 57A-57B, 57-58, 89A-89B, 89-90, 129, 155A-155B, 155-156, 197A-197B, 197-198, 221A-221B, 221-222, 241, 265A-265B, 265-266, 311A-311B, 311-312, 351A-351B, 351-352, 377A-377B, 377-378, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 461, 479A-479B, 479-480

**Grade 3:** 14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 76A-76B, 76-77, 140A-140B, 140-141, 160A-160B, 160-161, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-335, 346A-346B, 346-347, 380A-380B, 380-381, 436A-436B, 436-439, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 644A-644B, 644-645, 656A-656B, 656-657, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 140A-140B, 140-141, 156A-156B, 156-157, 222A-222B, 222-223, 278A-278B, 278-279, 290A-290B, 290-291, 326A-326B, 326-327, 384A-384B, 384-385, 396A-396B, 396-397, 474A-474B, 474-465, 512A-512B, 512-513, 584A-584B, 584-585, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

- **Identify what is known and unknown in familiar situations.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 37, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 75, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200,



221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 311A-311B, 311-312, 327A-327B, 327-328, 329A-329B, 329-330, 351A-351B, 351-352, 377A-377B, 377-378, 379A-379B, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 14A-14B, 14-15, 32A-32B, 32-33, 4A-44B, 44-45, 76A-76B, 76-77, 104A-104B, 104-105, 140A-140B, 140-141, 160A-160B, 160-161, 170A-170B, 170-171, 236A-236B, 236-237, 238A-238B, 238-239, 270A-270B, 270-273, 294A-294B, 294-295, 332A-332B, 332-335, 346A-346B, 346-347, 348A-348B, 348-349, 380A-380B, 380-381, 404A-404B, 404A-404B, 404-405, 406A-406B, 406-407, 436A-436B, 436-439, 476A-476B, 476-477, 528A-528B, 528-529, 540A-540B, 540-541, 542A-542B, 542-543, 578A-578B, 578-579, 588A-588B, 588-589, 590A-590B, 590-591, 644A-644B, 644-645, 656A-656B, 656-657, 658A-658B, 658-659, 688A-688B, 688-689, 708A-708B, 708-709, 710A-710B, 710-711

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 40A-40B, 40-41, 102A-102B, 102-103, 140A-140B, 140-141, 168A-168B, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234A-234B, 234-235, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 326A-326B, 326-327, 342A-342B, 342-343, 344A-344B, 344-345, 384A-384B, 384-385, 396A-396B, 396-397, 412A-412B, 412-413, 460A-460B, 460-461, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 538A-538B, 538-539, 540A-540B, 540-541, 584A-584B, 584-585, 602A-602B, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666A-666B, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716A-716B, 716-717

## 2.3 Construct solutions

- **Organize relevant information.**

**Grade K:** 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34, 67A-67B, 67-68, 125A-125B, 125-126, 130, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 159J, 233A-233B, 233-234

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B,

353-354, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A-379B, 379-380, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 405A-405B, 405-406, 413, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 38, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 89A-89B, 89-90, 123A-123B, 123-124, 155A-155B, 155-156, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 242, 265A-265B, 265-266, 279A-279B, 279-280, 284, 289J, 311A-311B, 311-312, 313A-313B, 313-314, 319A-319B, 319, 321A-321B, 322, 327A-327B, 327-328, 329A-329B, 329-330, 334, 336, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 351A-351B, 351-352, 353A-353B, 353, 363A-363B, 363, 373A-373B, 373, 375A-375B, 375, 377A-377B, 377-378, 379A-379B, 379-380, 386, 413A-413B, 413-414, 415A-415B, 415-416, 437A-437B, 438, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 489A-489B, 489-490

**Grade 3:** 45, 140A-140B, 140-141, 144, 145, 171, 177, 180, 183, 187, 190J, 204A-204B, 204-207, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 239, 240, 241, 245, 247, 253, 257, 270A-270B, 270-273, 274, 275, 300, 303, 305, 307, 311, 346A-346B, 346-347, 352, 353, 354, 355, 357, 359, 363, 367, 404A-404B, 404-405, 413, 415, 421, 425, 578A-578B, 578-579, 580, 591, 597, 599, 604, 608, 644A-644B, 644-645, 646, 665, 667, 672, 676

**Grade 4:** 94A-94B, 94-95, 140A-140B, 140-141, 156A-156B, 156-157, 188J, 198A-198B, 198-199, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-219, 222A-222B, 222-223, 224, 225, 230A-230B, 230-231, 234A-234B, 234-235, 241, 249, 252, 253, 290A-290B, 290-291, 326A-326B, 326-327, 396A-396B, 396-397, 460A-460B, 460-461, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 538A-538B, 538-539, 540A-540B, 540-541, 584A-584B, 584-585, 602A-602B, 602-603, 662A-662B, 662-663, 686I, 696A-696B, 696-697, 714A-714B, 714-715

- **Select and use appropriate mathematical tools.**

**Grade K:** 59B, 75K, 81B, 140TE, 142TE, 145A, 145B, 148TE, 150TE, 151A, 151B, 151-152, 153A, 153B, 154TE, 175A, 175B, 255B, 277B, 281B, 295B

**Grade 1:** 25B, 38, 43B, 53B, 57B, 69B, 84, 91B, 118, 123B, 145B, 150, 198, 203I, 215B, 234, 255B, 274, 285B, 324, 329B, 358, 363B, 365, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381, 410, 411, 413, 415B, 425B, 452, 457B, 459B, 488

**Grade 2:** 23B, 36, 49B, 74, 79I, 79J, 97B, 113B, 128, 168, 193B, 204, 217B, 240, 284, 289I, 337, 339, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B, 357-358, 363A, 365A, 365B, 365, 367A, 367, 369A, 368B, 369-370, 384, 391B, 405B, 420, 427B, 453B, 460, 473B, 494

**Grade 3:** 22B, 32, 39, 40B, 42B, 66B, 70B, 77, 86B, 89, 131, 162B, 190I, 195, 198B, 207, 231, 262B, 273, 291, 292B, 316B, 327, 335, 344B, 372B, 381, 396B, 401, 449, 467, 501, 504B, 522B, 529, 532-533, 534-535, 536-537, 538B, 544, 545, 549, 556, 557, 560, 561, 563, 566B, 571, 572B, 579, 582-583, 584-587, 592, 593, 597, 604, 608, 621, 638B, 652B, 689, 693, 694B, 704B

**Grade 4:** 20B, 22B, 24, 37, 40B, 60J, 64B, 72B, 82B, 85, 96B, 122I, 127, 128B, 152B, 160B, 188I, 188J, 212B, 219, 234B, 267, 319, 320B, 366B, 368B, 377, 389, 411, 443, 455, 456B, 496J, 513, 516B, 519, 536B, 560J, 562J, 568B, 581, 585, 588A-588B, 588-589, 590A-590B, 590-591, 592A-592B, 592-593, 594A-594B, 594-595, 604, 605, 609, 610, 612, 616, 620, 622J, 624B, 641, 649, 652A-652B, 652-653, 654A-654B, 654-655, 656A-656B, 656-657, 673, 692B, 709

- **Apply viable strategies and appropriate concepts and procedures to construct a solution.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 143A-143B, 143-144, 155A-155B, 155-156, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 129, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 289J, 311A-311B, 311-312, 313A-

313B, 313-314, 327A-327B, 327-328, 329A-329B, 329-330, 335, 351A-351B, 351-352, 377A-377B, 377-378, 379A-379B, 379-380, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 32A-32B, 32-33, 44A-44B, 44-45, 76A-76B, 76-77, 104A-104B, 104-105, 140A-140B, 140-143, 170A-170B, 170-171, 236A-236B, 236-237, 238A-238B, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294A-294B, 294-295, 332A-332B, 332-335, 348A-348B, 348-349, 380A-380B, 380-381, 406A-406B, 406-407, 436A-436B, 436-439, 476A-476B, 476-477, 528A-528B, 528-529, 542A-542B, 542-543, 578A-578B, 578-579, 590A-590B, 590-591, 644A-644B, 644-645, 658A-658B, 658-659, 688A-688B, 688-689, 710A-710B, 710-711

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40A-40B, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102A-102B, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168A-168B, 168-169, 222A-222B, 222-223, 234A-234B, 234-235, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 326A-326B, 326-327, 344A-344B, 344-345, 396A-396B, 396-307, 412A-412B, 412-413, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 540A-540B, 540-541, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 648A-648B, 648-649, 666A-666B, 666-667, 714A-714B, 714-715, 716A-716B, 716-717

### **3. The student uses mathematical reasoning.**

*To meet this standard, the student will:*

#### **3.1 Analyze information.**

- **Compare and interpret information in familiar situations.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34, 41A-41B, 41-42, 43A-43B, 43-44, 47A-47B, 47-48, 63A-63B, 63-64, 67A-67B, 67-68, 71A-71B, 71-72, 87A-87B, 87-88, 95A-95B, 95-96, 97A-97B, 97-98, 121A-121B, 121-122, 125A-125B, 125-126, 127A-127B, 127-128, 130, 133A-133B, 133-134, 135A-135B, 135-136, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 151A-151B, 151-152, 155A-155B, 155-156, 157, 158, 159J, 177A-177B, 177-178, 185A-185B, 185-186, 189A-189B, 189-190, 191A-191B, 191-192, 199A-199B, 199-200, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A-379B, 379-380, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 405A-405B, 405-406, 413, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 19A-19B, 19-20, 31A-31B, 31-32, 38, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 242, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 284, 289I, 289J, 311A-311B, 311-312, 313A-313B, 313-314, 315A-316B, 315-316, 319A-319B, 319-320, 321A-321B, 321-322, 323A-323B, 323-324, 327A-327B, 327-328, 329A-329B, 329-330, 334, 336, 340, 343A-343B, 343-344, 345A-345B, 345-346, 345, 346, 347A-347B, 347, 348, 351A-351B, 351-352, 353A-343B, 353, 363A-363B, 363, 373A-373B, 373, 375A-375B, 375, 377A-377B, 377-378, 379A-379B, 379-380, 381, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 437A-437B, 438, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 44A-44B, 44-45, 104A-104B, 104-105, 170A-170B, 170-171, 190J, 204A-204B, 204-207, 208A-208B, 208-211, 212A-212B, 212-215, 216A-216B, 216-217, 218A-218B, 218-221, 222A-222B, 222-223, 226A-226B, 226-231, 232A-232B, 232-233, 234A-234B, 234-235, 236A-236B, 236-237, 238A-238B, 238-239, 234A-234B, 234-235, 240, 241, 244, 245, 247, 252, 253, 256, 257, 294A-294B, 294-295, 348A-348B, 348-349, 406A-406B, 406-407, 474A-474B, 474-475, 476A-476B, 476-477, 478, 481, 483, 485, 491, 495, 542A-542B, 542-543, 590A-590B, 590-591, 656A-656B, 656-657, 658A-658B, 658-659, 708A-708B, 708-709, 710A-710B, 710-711

**Grade 4:** 40A-40B, 40-41, 90A-90B, 90-91, 102A-102B, 102-103, 140A-140B, 140-141, 168A-168B, 168-169, 198A-198B, 198-199, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 222A-222B, 222-223, 224, 225, 226A-226B, 226-229, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-235, 236, 237, 238, 239, 241, 242, 243, 245, 247, 248, 249, 251, 252, 253, 278A-278B, 278-281, 292A-292B, 292-293, 342A-342B,

342-343, 344A-344B, 344-345, 346, 347, 359, 363, 384A-384B, 384-385 412A-412B, 412-413, 460A-460B, 460-461, 474A-474B, 474-475, 478A-478B, 478-479, 540A-540B, 540-541, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 662A-662B, 662-663, 666A-666B, 666-667, 696A-696B, 696-697, 716A-716B, 716-717

- **Validate thinking using models, known facts, patterns, and relationships.**

**Grade K:** 1I, 1J, 19A-19B, 19-20, 21A-21B, 21-22, 25I, 25J, 33A-33B, 33-34, 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 50, 51I, 51J, 67A-67B, 67-68, 71A-71B, 71-72, 75I, 75J, 95A-95B, 95-96, 97A-97B, 97-98, 100, 101I, 101J, 113A-113B, 113-114, 125A-125B, 125-126, 127A-127B, 127-128, 130, 131I, 131J, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 155A-155B, 155-156, 157, 158, 159I, 159J, 185A-185B, 185-186, 191A-191B, 191-192, 195I, 195J, 217A-217B, 217-218, 219A-219B, 219-220, 223I, 223J, 233A-233B, 233-234, 239A-239B, 239-240, 243I, 243J, 249A-249B, 249-250, 259A-259B, 259-260, 263I, 263J, 279A-279B, 279-280, 281A-281B, 281-282, 285I, 285J, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298, 299A-299B, 299-300, 302

**Grade 1:** 1I, 1J, 3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9, 10, 21A-21B, 21-22, 24, 33A-33B, 33-34, 36, 37, 41, 43I, 43J, 57A-57B, 57-58, 89I, 89J, 71A-71B, 71-72, 74, 79A-79B, 79-80, 88A, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 123I, 123J, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 154A, 155I, 155J, 166, 177A-177B, 177-178, 193A-193B, 193-194, 203I, 203J, 210, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 239, 245A-245B, 245-246, 251A-251B, 251-252, 253, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262, 269A-269B, 269-270, 271, 273, 274, 275, 278, 279I, 279J, 291A-291B, 291-292, 302, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 317A-317B, 317-318, 319A-319B, 319-320, 329I, 329J, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 363I, 363J, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A-379B, 379-380, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 405A-405B, 405-406, 413, 415I, 415J, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 457I, 457J, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 1I, 1J, 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 33, 38, 41J, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 75, 79I, 79J, 89A-89B, 89-90, 99A-99B, 99-100, 105A-105B, 105-106, 107, 123A-123B, 123-124, 132, 133J, 155A-155B, 155-156, 157A-157B, 157-158, 161A-161B, 161-162, 163A-163B, 163-164, 167, 173J, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 209J, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-

236, 242, 245I, 245J, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 284, 285, 289I, 289J, 311A-311B, 311-312, 313A-313B, 313, 319A-319B, 319, 321A-321B, 322, 327A-327B, 327-328, 329A-329B, 329-330, 334, 336, 339I, 339J, 340, 343, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 351A-351B, 351-352, 353A-353B, 353, 363A-363B, 363, 373A-373B, 373, 375A-375B, 375, 377A-377B, 377-378, 379A-379B, 379-380, 381, 386, 389I, 389J, 405A-405B, 405-406, 408, 411-412, 413A-413B, 413-414, 415A-415B, 415-416, 420, 424, 425I, 425J, 431A-431B, 431-432, 437A-437B, 438, 439A-439B, 439-440, 447A-447B, 447-448, 453A-453B, 453-454, 455A-455B, 455-456, 465J, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 2J, 14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 76A-76B, 76-77, 102A-102B, 102-103, 104A-104B, 104-105, 124J, 140A-140B, 140-141, 160A-160B, 160-161, 170A-170B, 170-171, 190I, 190J, 216A-216B, 216-217, 236A-236B, 236-237, 238A-238B, 238-239, 258J, 270B-270B, 270-273, 284A-284B, 284-285, 294A-294B, 294-295, 314I, 314J, 332A-332B, 332-333, 346A-346B, 346-347, 348A-348B, 348-349, 368A, 380A-380B, 380-381, 406A-406B, 406-407, 426J, 436A-436B, 436-439, 474A-474B, 474-475, 476A-476B, 476-477, 496I, 528A-528B, 528-529, 542A-542B, 542-543, 562I, 578A-578B, 578-579, 588A-588B, 588-589, 590A-590B, 590-591, 610I, 644A-644B, 644-645, 656A-656B, 656-657, 658A-658B, 658-659, 678I, 678J, 708A-708B, 708-709, 710A-710B, 710-711

**Grade 4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40A-40B, 40-41, 90A-90B, 90-91, 102A-102B, 102-103, 122I, 140A-140B, 140-141, 156A-156B, 156-157, 164A-164B, 164-165, 168A-168B, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 230A-230B, 230-231, 234A-234B, 234-235, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 326A-326B, 326-327, 342A-342B, 342-343, 344A-344B, 344-345, 384A-384B, 384-385, 396A-396B, 396-397, 412A-412B, 412-413, 460A-460B, 460-461, 474A-474B, 474-475, 478A-478B, 478-479, 512A-512B, 512-513, 538A-538B, 538-539, 540A-540B, 540-541, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666A-666B, 666-667, 686I, 696A-696B, 696-697, 706A-706B, 706-709, 710A-710B, 710-713, 714A-714B, 714-715, 716A-716B, 716-717

### 3.2 Predict Results.

- **Make conjectures based on analysis of familiar problem situations.**

**Grade K:** 33A-33B, 33-34, 125A-125B, 125-126, 130, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158

**Grade 1:** 7A-7B, 7-8, 221A-221B, 221-222, 231, 238, 249A-249B, 249-250, 253, 261A-261B, 261-262, 299A-299B, 299-300, 305, 323, 328, 351A-351B, 351-352, 355, 362, 363J, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B,

371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381, 383A-383B, 383-384, 385A-385B, 385-386, 387A-387B, 387-388, 389A-389B, 389-390, 391A-391B, 391-392, 393A-393B, 393-394, 399, 400, 401A-401B, 401-402, 403A-403B, 403-404, 407, 410, 413, 414, 414B, 467A-467B, 467-468, 469, 492

**Grade 2:** 99A-99B, 99-100, 107, 132, 133I, 167, 141A-141B, 141-142, 149A-149B, 149-150, 155A-155B, 155-156, 191A-191B, 191-192, 197A-197B, 197-198, 229A-229B, 229-230, 289I, 339J, 340, 245I, 373A-373B, 373-374, 375A-375B, 375-376, 381, 388, 389J, 408, 411, 412, 413A-413B, 413-414, 420, 424, 429A-429B, 429-430, 445A-445B, 445-446,

**Grade 3:** 102A-102B, 102-103, 160A-160B, 160-161, 270A-270B, 270-273, 332A-332B, 332-335, 380A-380B, 380-381, 436A-436B, 436-439, 588A-588B, 588-589, 644A-644B, 644-645, 678J, 704A-704B, 704-707, 708A-708B, 708-709

**Grade 4:** 60I, 68A-68B, 68-71, 72A-72B, 72-73, 90A-90B, 90-91, 140A-140B, 140-143, 230A-230B, 230-231, 254I, 258A-258B, 258-259, 278A-278B, 278-279, 316A-316B, 316-317, 364J, 368A-368B, 368-369, 560I, 562A-562B, 562-563, 584A-584B, 584-585, 636A-636B, 636-637, 686J, 710A-710B, 710-713

### 3.3 Draw conclusions and verify results.

- **Test conjectures by finding examples to support or contradict them.**

**Grade K:** 33A-33B, 33-34, 125A-125B, 125-126, 130, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158

**Grade 1:** 7A-7B, 7-8, 249A-249B, 249-250, 253, 351A-351B, 351-352, 355, 362, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403-404, 410, 413, 467A-467B, 467-468, 469, 492

**Grade 2:** 99A-99B, 99-100, 107, 132, 133I, 167, 245I, 289I, 339J, 340, 363J, 373A-373B, 373-374, 375A-375B, 375-376, 381, 388, 389J, 408, 411, 412, 413A-413B, 413-414, 420, 424

**Grade 3:** 270A-270B, 270-273, 332A-332B, 332-335, 380A-380B, 380-381, 436A-436B, 436-439, 644A-644B, 644-645, 678J, 708A-708B, 708-709

**Grade 4:** 90A-90B, 90-91, 140A-140B, 140-143, 230A-230B, 230-231, 254I, 278A-278B, 278-279, 474A-474B, 474-475, 584A-584B, 584-585, 648A-648B, 648-649, 662A-662B, 662-663, 686J, 700A-700B, 700-703, 706A-706B, 706-709, 710A-710B, 710-711

- **Support arguments and justify results.**

**Grade K:** 19A-19B, 19-20, 33A-33B, 33-34, 43A-43B, 43-44, 67A-67B, 67-68, 95A-95B, 95-96, 125A-125B, 125-126, 130, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 185A-185B, 185-186, 217A-217B, 217-218, 233A-233B, 233-234, 249A-249B, 249-250, 259A-259, 279A-279B, 279-280, 297A-297B, 297-298



**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 99A-99B, 99-100, 111A-111B, 111-112, 133A-133B, 133-134, 143A-143B, 143-144, 177A-177B, 177-178, 215A-215B, 215-216, 251A-251B, 251-252, 261A-261B, 261-262, 291A-291B, 291-292, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 431A-431B, 431-432, 467A-467B, 467-468

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 57A-57B, 57-58, 67A-67B, 67-68, 89A-89B, 89-90, 105A-105B, 105-106, 155A-155B, 155-156, 161A-161B, 161-162, 169, 197A-197B, 197-198, 221A-221B, 221-222, 233A-233B, 233-234, 265A-265B, 265-266, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 413A-413B, 413-414, 439A-439B, 439-440, 453A-453B, 453-454, 479A-479B, 479-480, 487A-487B, 487-488

**Grade 3:** 42A-42B, 42-43, 76A-76B, 76-77, 140A-140B, 140-141, 160A-160B, 160-161, 236A-236B, 236-237, 270A-270B, 270-273, 332A-332B, 332-333, 380A-380B, 380-381, 436A-436B, 436-439, 528A-528B, 528-529, 578A-578B, 578-579, 644A-644B, 644-645, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 38A-38B, 38-39, 140A-140B, 140-141, 222A-222B, 222-223, 230A-230B, 230-231, 278A-278B, 278-279, 326A-326B, 326-327, 384A-384B, 384-385, 396A-396B, 396-399, 474A-474B, 474-475, 512A-512B, 512-513, 584A-584B, 584-585, 648A-648B, 648-649, 714A-714B, 714-715

- **Check for reasonableness of results.**

**Grade K:** 33A-33B, 33-34, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158

**Grade 1:** 57A-57B, 57-58, 133A-133B, 215A-215B, 261A-261B, 261-262, 351A-351B, 351-352

**Grade 2:** 9A-9B, 9-10, 57A-57B, 57-58, 89A-89B, 89-90, 161A-161B, 161-162, 169, 221A-221B, 221-222, 265A-265B, 265-266, 351A-351B, 351-352, 439A-439B, 439-440, 479A-479B, 479-480

**Grade 3:** 76A-76B, 76-77, 140A-140B, 140-141, 380A-380B, 380-381, 436A-436B, 436-439, 632A-632B, 633, 634, 635, 688A-688B, 688-689

**Grade 4:** 38A-38B, 38-39, 140A-140B, 140-141, 326A-326B, 326-327, 384A-384B, 384-385, 396A-396B, 396-399, 474A-474B, 474-475, 714A-714B, 714-715

- **Reflect on and evaluate procedures and results in familiar situations.**

**Grade K:** 19A-19B, 19-20, 21A-21B, 21-22, 33A-33B, 33-34, 43A-43B, 43-44, 47A-47B, 47-48, 67A-67B, 67-68, 71A-71B, 71-72, 95A-95B, 95-96, 97A-97B, 97-98, 125A-125B, 125-126, 127A-127B, 127-128, 130, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 155A-155B, 155-156, 157, 158, 185A-185B, 185-186, 191A-191B, 191-192, 217A-217B, 217-218, 219A-219B, 219-220, 233A-233B, 233-234, 239A-239B, 239-240, 249A-249B, 249-250, 259A-259B, 259-260, 279A-279B, 279-280, 281A-281B, 281-282, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 9A-9B, 9-10, 19A-19B, 19-20, 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

**Grade 3:** 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 140A-140B, 140-141, 160A-160B, 160-161, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 436A-436B, 436-439, 528A-528B, 528-529, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-40B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-475, 512A-512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-585, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

#### **4. The Student Communicates Knowledge And Understanding In Both Everyday And Mathematical Language.**

*To meet this standard, the student will:*

##### **4.1 Gather information**

- **Develop and follow a simple plan for collecting information.**

**Grade K:** 33A-33B, 33-34, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 159J

**Grade 1:** 177A-177B, 177-178, 203I, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413

**Grade 2:** 38, 209J, 242, 245I, 284, 289I, 289J, 313A-313B, 313, 319A-319B, 319, 321A-321B, 322, 334, 336, 339J, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 353A-353B, 353, 363A-363B, 363, 386, 373A-373B, 373, 375A-375B, 375, 381  
437A-437B, 438

**Grade 3:** 22A, 190J, 204A-204B, 204-207, 208A, 208B, 216A, 222A, 226A, 226B, 228A, 228B, 231, 232A, 232B, 236A, 236B, 270B, 678J, 700B

**Grade 4:** 188J, 206A, 206B, 208A, 208B, 211, 212B, 219, 22B, 226B, 230A-230B, 230-231, 536A, 536B, 664A, 686J, 704A, 706B, 709, 710A

- **Use reading, listening, and observation to access and extract mathematical information from a variety of sources such as pictures, diagrams, physical models, classmates, oral narratives, and symbolic representations.**

**Grade K:** 1I, 1J, 19A-19B, 19-20, 21A-21B, 21-22, 25I, 25J, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34, 43A-43B, 43-44, 47A-47B, 47-48, 51I, 51J, 67A-67B, 67-68, 71A-71B, 71-72, 75I, 75J, 95A-95B, 95-96, 97A-97B, 97-98, 101I, 101J, 125A-125B, 125-126, 127A-127B, 127-128, 130, 131I, 131J, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 155A-155B, 155-156, 157, 158, 159I, 159J, 185A-185B, 185-186, 191A-191B, 191-192, 195I, 195J, 217A-217B, 217-218, 219A-219B, 219-220, 223I, 223J, 233A-233B, 233-234, 239A-239B, 239-240, 243I, 243J, 249A-249B, 249-250, 259A-259B, 259-260, 263I, 263J, 279A-279B, 279-280, 281A-281B, 281-282, 285I, 285J, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 1I, 1J, 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 43I, 43J, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 89I, 89J, 99A-99B, 99-100, 111A-111B, 111-112, 113A-113B, 113-114, 123I, 123J, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 155I, 155J, 177A-177B, 177-178, 193A-193B, 193-194, 203I, 203J, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 239I, 239J, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 279I, 279J, 291A-291B, 291-292, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 317A-317B, 317-318, 319A-319B, 319-320, 329I, 329J, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 363I, 363J, 364, 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A-379B, 379-380, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 405A-405B, 405-406, 413, 415I, 415J, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 457I, 457J, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

**Grade 2:** 1I, 79I, 79J, 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69A-69B, 69-70, 75, 89A-89B, 89-90, 105A-105B, 105-106, 123A-123B, 123-124, 133J, 155A-155B, 155-156, 161A-161B, 161-162, 163A-163B, 163-164, 173J, 189A-189B, 189-190, 197A-197B, 197-198, 199A-199B, 199-200, 209J, 221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 245I, 245J, 251A-251B, 251-252, 265A-265B, 265-266, 279A-279B, 279-280, 285, 289I, 289J, 311A-311B, 311-312, 327A-327B, 327-328, 329A-329B, 329-330, 339I, 339J, 351A-351B, 351-352, 377A-377B, 377-378, 379A-379B, 379-380, 389I, 389J, 405A-405B, 405-406, 413A-413B, 413-414, 415A-415B, 415-416, 425I, 425J, 439A-439B, 439-440, 453A-453B, 453-454, 455A-455B, 455-456, 465I, 465J, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 2I, 2J, 14A-14B, 14-15, 32A-32B, 32-33, 44A-44B, 44-45, 64I, 64J, 76A-76B, 76-77, 104A-104B, 104-105, 124I, 124J, 140A-140B, 140-141, 160A-160B, 160-161, 170A-170B, 170-171, 190I, 190J, 216A-216B, 216-217, 236A-236B, 236-237, 238A-238B, 238-239, 258I, 258J, 270A-270B, 270-273, 284A-284B, 284-285, 294A-294B, 294-295, 314I, 314J, 332A-332B, 332-335, 346A-346B, 346-347, 348A-348B, 348-349, 368I, 368J, 380A-380B, 380-381, 404A-404B, 404-405, 406A-406B, 406-407, 426I, 426J, 436A, 436A-436B, 436-439, 474A-474B, 474-475, 476A-476B, 476-477, 496I, 496J, 528A-528B, 528-529, 540A-540B, 540-541, 542A-542B, 542-543, 562I, 562J, 578A-578B, 578-579, 588A-588B, 588-589, 590A-590B, 590-591, 610I, 610J, 644A-644B, 644-645, 656A-656B, 656-657, 658A-658B, 658-659, 678I, 678J, 688A-688B, 688-689, 708A-708B, 708-709, 710A-710B, 710-711

**Grade 4:** 2I, 2J, 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40A-40B, 40-41, 60I, 60J, 90A-90B, 90-91, 94A-94B, 94-95, 102A-102B, 102-103, 122I, 122J, 140A-140B, 140-143, 156A-156B, 156-157, 168A-168B, 168-169, 188I, 188J, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 212A-212B, 212-215, 216A-216B, 216-221, 222A-222B, 222-223, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-235, 254I, 254J, 278A-278B, 278-279, 290A-290B, 290-291, 292A-292B, 292-293, 312I, 312J, 326A-326B, 326-327, 344A-344B, 344-345, 364I, 364J, 384A-384B, 384-385, 396A-396B, 396-307, 412A-412B, 412-413, 432I, 432J, 474A-474B, 474-475, 478A-478B, 478-479, 498I, 498J, 512A-512B, 512-513, 540A-540B, 540-541, 560I, 560J, 584A-584B, 584-585, 600A-600B, 600-601, 602A-602B, 602-603, 622I, 622J, 648A-648B, 648-649, 666A-666B, 666-667, 714A-714B, 714-715, 716A-716B, 716-717

- **Use available technology to browse and retrieve mathematical information from a variety of sources.**

**Grade K:** 59B, 75K, 81B, 151B, 175A, 175B, 255B, 277B, 281B, 295B

**Grade 1:** 25B, 38, 40, 43B, 53B, 57B, 69B, 84, 86, 91B, 118, 120, 123B, 145B, 150, 152, 198, 200, 215B, 234, 236, 255B, 274, 276, 285B, 324, 326, 329B, 358, 360, 363B, 410, 412, 415B, 425B, 452, 456, 457B, 459B, 488, 490

**Grade 2:** 23B, 36, 38, 49B, 74, 76, 79I, 97B, 113B, 128, 130, 168, 170, 193B, 204, 206, 217B, 240, 242, 284, 286, 336, 337, 365B, 384, 386, 391B, 405B, 420, 422, 427B, 453B, 460, 462, 473B, 494

**Grade 3:** 22B, 32, 39, 40B, 42B, 66B, 70B, 77, 86B, 89, 131, 162B, 195, 198B, 207, 231, 262B, 273, 291, 292B, 316B, 327, 335, 344B, 372B, 381, 396B, 401, 449, 467, 468B, 501, 504B, 522B, 538B, 566B, 571, 572B, 579, 621, 638B, 645, 652B, 689, 693, 694B, 704B

**Grade 4:** 20B, 22B, 24, 37, 40B, 64B, 72B, 82B, 85, 96B, 127, 128B, 152B, 160B, 212B, 219, 234B, 267, 319, 320B, 366B, 368B, 377, 389, 411, 443, 455, 456B, 513, 516B, 519, 536B, 568B, 581, 585, 624B, 641, 649, 692B, 709

## 4.2 Organize and interpret information

- **Organize and clarify mathematical information in at least one way—reflecting, verbalizing, discussing, or writing.**

**Grade K:** 1I, 1J, 19A-19B, 19-20, 25I, 25J, 33A-33B, 33-34, 43A-43B, 43-44, 51I, 51J, 67A-67B, 67-68, 75I, 75J, 95A-95B, 95-96, 101I, 101J, 125A-125B, 125-126, 130, 131I, 131J, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 159I, 159J, 195I, 195J, 223I, 223J, 243I, 243J, 263I, 263J, 285I, 285J

**Grade 1:** 4I, 4J, 7A-7B, 7-8, 21A-21B, 21-22, 43I, 43J, 57A-57B, 57-58, 71A-71B, 71-72, 89I, 89J, 99A-99B, 99-100, 111A-111B, 111-112, 123I, 123J, 133A-133B, 133-134, 143A-143B, 143-144, 155I, 155J, 177A-177B, 177-178, 203I, 203J, 215A-215B, 215-216, 223A-223B, 223-224, 239I, 239J, 251A-251B, 251-252, 261A-261B, 261-262, 279I, 279J, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 329I, 329J, 339A-339B, 339-340, 351A-351B, 351-352, 369A-369B, 369-370, 379A-379B, 379-380, 393I, 393J, 415I, 415J, 431A-431B, 431-432, 445A-445B, 445-446, 457I, 457J, 467A-467B, 467-468, 481A-481B, 481-482

**Grade 2:** 1I, 1J, 9A-9B, 9-10, 19A-19B, 19-20, 41I, 41J, 57A-57B, 57-58, 67A-67B, 67-68, 79I, 79J, 89A-89B, 89-90, 105A-105B, 105-106, 133I, 133J, 155A-155B, 155-156, 161A-161B, 161-162, 173I, 173J, 189A-189B, 189-190, 197A-197B, 197-198, 209I, 209J, 221A-221B, 221-222, 233A-233B, 233-234, 245I, 245J, 251A-251B, 251-252, 265A-265B, 265-266, 289I, 289J, 311A-311B, 311-312, 327A-327B, 327-328, 351A-351B, 351-352, 377A-377B, 377-378, 339I, 339J, 389I, 389J, 405A-405B, 405-406, 413A-413B, 413-414, 425I, 425J, 439A-439B, 439-440, 453A-453B, 453-454, 465I, 465J, 479A-479B, 479-480, 487A-487B, 487-488, 495

**Grade 3:** 2I, 2J, 64I, 64J, 76A-76B, 76-77, 124I, 12J, 140A-140B, 140-141, 190I, 190J, 236A-236B, 236-237, 258I, 258J, 270A-270B, 270-273, 314I, 314J, 332A-332B, 332-335, 346A-346B, 346-347, 368I, 368J, 380A-380B, 380-381, 404A-404B, 404-405, 421, 426I, 426J, 436A-436B, 436-439, 474A-474B, 474-475, 496I, 496J, 528A-528B, 528-529, 540A-540B, 540-541, 562I, 562J, 578A-578B, 578-579, 588A-588B, 588-589, 610I, 610J, 644A-644B, 644-645, 656A-656B, 656-657, 678I, 678J, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 2I, 2J, 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 60I, 60J, 90A-90B, 90-91, 94A-94B, 94-95, 122I, 122J, 140A-140B, 140-143, 156A-156B, 156-157, 188I, 188J, 198A-198B, 198-199, 222A-222B, 222-223, 254I, 254J, 278A-278B, 278-281, 290A-290B, 290-291, 312I, 312J, 326A-326B, 326-329, 342A-342B, 342-343, 364I, 364J, 384A-384B, 384-385, 396A-396B, 396-399, 432I, 432J, 460A-460B, 460-461, 474A-474B, 474-475, 498I, 498J, 512A-512B, 512-513, 538A-538B, 538-539, 560I, 560J, 584A-584B, 584-585, 600A-600B, 600-601, 622I, 622J, 648A-648B, 648-649, 662A-662B, 662-663, 686I, 686J, 696A-696B, 696-697, 714A-714B, 714-715

### 4.3 Represent and share information

- **Express ideas using mathematical language and notation such as physical or pictorial models, tables, charts, graphs, or symbols.**

**Grade K:** 1I, 1J, 25I, 33A-33B, 33-34, 51I, 51J, 67A-67B, 67-68, 75I, 75J, 101I, 101J, 125A-125B, 125-126, 130, 131I, 131J, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 157, 158, 159I, 159J, 195I, 195J, 223I, 223J, 243I, 243J, 263I, 263J, 285I, 285J

**Grade 1:** 1I, 1J, 21A-21B, 21-22, 43I, 43J, 57A-57B, 57-58, 71A-71B, 71-72, 89I, 89J, 111A-111B, 111-112, 123I, 123J, 133A-133B, 133-134, 143A-143B, 143-144, 155I, 155J, 177A-177B, 177-178, 203I, 203J, 215A-215B, 215-216, 239I, 239J, 261A-261B, 261-262, 279I, 279J, 291A-291B, 291-292, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 329I, 329J, 363I, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413, 415I, 415J, 431A-431B, 431-432, 457I, 457J, 481A-481B, 481-482

**Grade 2:** 1I, 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 41J, 57A-57B, 57-58, 69A-69B, 69-70, 79I, 79J, 89A-89B, 89-90, 105A-105B, 105-106, 133A, 163A-163B, 163-164, 173J, 199A-199B, 199-200, 205, 209J, 221A-221B, 221-222, 235A-235B, 235-236, 245I, 245J, 279A-279B, 279-280, 289I, 289J, 311A-311B, 311-312, 339I, 339J, 389I, 389J, 425I, 425J, 439A-439B, 439-440, 455A-455B, 455-456, 465I, 465J, 479A-479B, 479-480, 487A-487B, 487-488, 489A-489B, 489-490

**Grade 3:** 2I, 2J, 76A-76B, 76-77, 124J, 140A-140B, 140-141, 190I, 190J, 204A-204B, 204-207, 208A-208B, 208-211, 216A-216B, 216-217, 218A-218B, 218-221, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 258I, 258J, 270A-270B, 270-273, 314I, 314J, 346A-346B, 346-347, 368I, 368J, 404A-404B, 404-405, 426I, 426J, 436A-436B, 436-439, 496I, 562I, 578A-578B, 578-579, 588A-588B, 588-589, 610I, 644A-644B, 644-645, 678I, 678J, 708A-708B, 708-709

**Grade 4:** 2I, 2J, 94A-94B, 94-95, 96A-96B, 96-97, 122J, 140A-140B, 140-143, 160A-160B, 160-163, 164A-164B, 164-165, 188I, 188J, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 222A-222B, 222-223, 254J, 312I, 312J, 326A-326B, 326-327, 364I, 396A-396B, 396-399, 432I, 432J, 474A-474B, 474-475, 498I, 512A-512B, 512-513, 536A-536B, 536-537, 560I, 560J, 584A-584B, 584-585, 648A-648B, 648-649, 686I, 686J, 690A-690B, 690-691, 692A-692B, 692-695, 704A-704B, 704-705, 706A-706B, 706-709

- **Explain or represent mathematical ideas and information to familiar people for a given purpose.**

**Grade K:** 1I, 1J, 19A-19B, 19-20, 21A-21B, 21-22, 25I, 25J, 33A-33B, 33-34, 43A-43B, 43-44, 47A-47B, 47-48, 51I, 51J, 67A-67B, 67-68, 71A-71B, 71-72, 75I, 75J, 95A-95B, 95-96, 97A-97B, 97-98, 101I, 101J, 125A-125B, 125-126, 127A-127B, 127-128, 130, 131I, 131J, 139A-139B, 139-140, 141A-141B, 141-142, 143A-143B, 143-144, 147A-147B, 147-148, 151A-151B, 151-152, 155A-155B, 155-156, 157, 158, 159I, 159J, 185A-185B, 185-186, 191A-191B, 191-192, 195I, 195J, 217A-217B, 217-218, 219A-219B, 219-220, 223I, 223J, 233A-233B, 233-234, 239A-239B, 239-240, 243I, 243J, 249A-249B, 249-250, 259A-259B, 259-260, 263I, 263J, 279A-279B, 279-280, 281A-281B, 281-282, 285I, 285J, 297A-297B, 297-298, 299A-299B, 299-300

**Grade 1:** 1I, 1J, 7A-7B, 7-8, 21A-21B, 21-22, 57A-57B, 57-58, 71A-71B, 71-72, 43I, 43J, 89I, 89J, 99A-99B, 99-100, 111A-111B, 111-112, 123I, 123J, 133A-133B, 133-134, 143A-143B, 143-144, 155I, 155J, 177A-177B, 177-178, 203I, 203J, 215A-215B, 215-216, 223A-223B, 223-224, 239I, 239J, 251A-251B, 251-252, 261A-261B, 261-262, 279I, 279J, 291A-291B, 291-292, 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 317A-317B, 317-318, 319A-319B, 319-320, 329I, 329J, 339A-339B, 339-340, 351A-351B, 351-352, 363I, 363J, 364, 365A-365B, 365-366, 369A-369B, 370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A-379B, 379-380, 381A-381B, 381, 383A-383B, 383-384, 389A-389B, 389-390, 403A-403B, 403, 413, 415I, 415J, 431A-431B, 431-432, 445A-445B, 445-446, 457I, 457J, 467A-467B, 467-468, 481A-481B, 481-482

**Grade 2:** 1I, 1J, 9A-9B, 9-10, 19A-19B, 19-20, 31A-31B, 31-32, 38, 41I, 41J, 57A-57B, 57-58, 69A-69B, 69-70, 79I, 79J, 89A-89B, 89-90, 105A-105B, 105-106, 133I, 133J, 163A-163B, 163-164, 173I, 173J, 199A-199B, 199-200, 209I, 209J,

221A-221B, 221-222, 233A-233B, 233-234, 235A-235B, 235-236, 242, 245I, 245J, 265A-265B, 265-266, 279A-279B, 279-280, 284, 289I, 289J, 311A-311B, 311-312, 313A-313B, 313, 319A-319B, 319, 321A-321B, 322, 334, 336, 339I, 339J, 340, 343A-343B, 343, 344, 345A-345B, 345, 346, 347A-347B, 347, 348, 351A-351B, 351-352, 353A-353B, 353, 363A-363B, 363, 373A-373B, 375, 379A-379B, 379-380, 381, 386, 389I, 389J, 425I, 425J, 437A-437B, 438, 439A-439B, 439-440, 465I, 465J, 479A-479B, 479-480, 489A-489B, 489-490

**Grade 3:** 2I, 2J, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 140A-140B, 140-141, 160A-160B, 160-161, 190I, 190J, 204A-204B, 204-207, 208A-208B, 208-211, 216A-216B, 216-217, 218A-218B, 218-221, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 258I, 258J, 270A-270B, 270-273, 284A-284B, 284-285, 314I, 314J, 332A-332B, 332-335, 346A-346B, 346-347, 368I, 368J, 380A-380B, 380-381, 404A-404B, 404-405, 426I, 426J, 436A-436B, 436-439, 474A-474B, 474-475, 496I, 528A-528B, 528-529, 562I, 578A-578B, 578-579, 588A-588B, 588-589, 610I, 644A-644B, 644-645, 656A-656B, 656-657, 678I, 678J, 688A-688B, 688-689, 708A-708B, 708-709

**Grade 4:** 2J, 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 60J, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 122I, 122J, 140A-140B, 140-143, 156A-156B, 156-157, 160A-160B, 160-163, 164A-164B, 164-165, 188I, 188J, 198A-198B, 198-199, 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-327, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 432I, 432J, 460A-460B, 460-461, 474A-474B, 474-475, 512A-512B, 512-513, 536A-536B, 536-537, 560J, 584A-584B, 584-585, 600A-600B, 600-601, 622J, 648A-648B, 648-649, 662A-662B, 662-663, 686I, 686J, 690A-690B, 690-691, 692A-692B, 692-695, 696A-696B, 696-697, 704A-704B, 704-705, 706A-706B, 706-709, 714A-714B, 714-715

## **5. THE STUDENT UNDERSTANDS HOW MATHEMATICAL IDEAS CONNECT WITHIN MATHEMATICS, OTHER SUBJECT AREAS, AND REAL-LIFE SITUATIONS.**

*To meet this standard, the student will:*

### **5.1 Relate concepts and procedures within mathematics.**

- **Relate conceptual and procedural understandings among familiar mathematical content strands.**

**Grade K:** 15A-15B, 15-16, 17A-17B, 17-18, 19A-19B, 19-20, 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46, 63A-63B, 63-64, 65A-65B, 65-66, 87A-87B, 87-88, 91A-91B, 92-92, 95A-95B, 95-96, 113A-113B, 113-114, 121A-121B, 121-122, 169A-169B, 169-170,



177A-177B, 177-178, 189A-189B, 189-190, 209A-209B, 209-210, 215A-215B, 215-216, 255A-255B, 255-256, 257A-257B, 257-258, 275A-275B, 275-276, 277A-277B, 277-278, 293A-293B, 293-294, 295A-295B, 295-296, 297A-297B, 297-298

**Grade 1:** 3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 49A-49B, 49-50, 51A-51B, 51-52, 57A-57B, 57-58, 65A-65B, 65-66, 67A-67B, 67-68, 71A-71B, 71-72, 77A-77B, 77-78, 93A-93B, 93-94, 133A-133B, 133-134, 137A-137B, 137-138, 141A-141B, 141-142, 183A-183B, 183-184, 185A-185B, 185-186, 189A-189B, 189-190, 255A-255B, 255-256, 261A-261B, 261-262, 297A-297B, 297-298, 301A-301B, 301-302, 315A-315B, 315-316, 377A-377B, 377-378, 379A-379B, 379-380, 421A-421B, 421-422, 427A-427B, 427-427, 435A-435B, 435A-435B, 437A-437B, 437-438, 439A-439B, 439-440, 445A-445B, 445-446

**Grade 2:** 5A-5B, 5-8, 9A-9B, 9-10, 17A-17B, 17-18, 19A-19B, 19-20, 23A-23B, 23-24, 25A-25B, 25-26, 27A-27B, 27-28, 29A-29B, 29-30, 49A-49B, 49-50, 57A-57B, 57-58, 63A-63B, 63-64, 65A-65B, 65-66, 91A-91B, 91-92, 95A-95B, 95-96, 97A-97B, 97-98, 99A-99B, 99-100, 101A-101B, 101-102, 115A-115B, 115-116, 117A-117B, 117-118, 141A-141B, 141-142, 149A-149B, 149-150, 157A-157B, 157-158, 159A-159B, 159-160, 161A-161B, 161-162, 185A-185B, 185-186, 187A-187B, 187-188, 191A-191B, 191-192, 193AS-193B, 193-194, 221A-221B, 221-222, 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 247A-247B, 247-248, 249A-249B, 249-250, 269A-269B, 269-270, 271A-271B, 271-272, 273A-273B, 273-274, 305A-305B, 305-306, 325A-325B, 325-326, 351A-351B, 351-352, 355A-355B, 355-356, 359A-359B, 359-360, 361, 384, 387, 388, 397A-397B, 397-398, 399A-399B, 399-400, 401A-401B, 401-402, 407A-407B, 407-408, 409A-409B, 409-410, 413A-413B, 413-414, 429A-429B, 429-430, 443A-443B, 443-444, 445A-445B, 445-446, 453A-453B, 453-454, 467A-467B, 467-468, 469A-469B, 469-470, 473A-473B, 473-474, 479A-479B, 479-480, 487A-487B, 487-488

**Grade 3:** 24A-24B, 24-27, 66A-66B, 66-69, 70A-70B, 70-71, 76A-76B, 76-77, 168A-168B, 168-169, 198A-198B, 198-199, 260A-260B, 260-261, 262A-262B, 262-265, 286A-286B, 286-287, 342A-342B, 342-343, 344A-344B, 344-345, 384A-384B, 384-385, 404A-404B, 404-405, 464A-464B, 464-467, 468A-468B, 468-471, 472A-472B, 472-473, 704A-704B, 704-707

**Grade 4:** 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-99, 100A-100B, 100-101, 160A-160B, 160-163, 164A-164B, 164-165, 166A-166B, 166-167, 196A-196B, 196-197, 464A-464B, 464-467, 468A-468B, 468-473, 476A-476B, 476-477, 690A-690B, 690-691, 692A-692B, 692-695, 706A-706B, 706-709

- **Recognize equivalent mathematical models and representations in familiar situations.**

**Grade K:** 27A-27B, 27-28, 52, 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 61A-61B, 61-62, 81A-81B, 81-82, 85A-85B, 85-86, 102, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112, 117A-117B, 117-118, 173A-173B, 173-174, 175A-175B, 175-176, 181A-181B, 181, 183A-183B, 183, 213A-213B, 213-214, 215A-215B, 215-216, 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 285I, 287A-287B, 288, 291A-291B, 291-292, 295A-295B, 295-296

**Grade 1:** 155J, 183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 279I, 281A-281B, 281-282, 283A-283B, 283-284, 285A-285B, 285-286, 287A-287B, 287-288, 293, 294, 303A-303B, 303-304, 305, 327, 328, 328A, 328B, 329I, 329J, 343A-343B, 343, 347A-347B, 347, 415I,

**Grade 2:** 5A-5B, 5-6, 9A-9B, 9-10, 17A-17B, 17-18, 25A-25B, 25-26, 57A-57B, 57-58, 79I, 79J, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 117A-117B, 117-118, 121A-121B, 121-122, 173I, 193A-193B, 193-194, 209I, 231A-231B, 231-232, 245J, 271A-271B, 271-272, 273A-273B, 273-274, 277A-277B, 277-278, 343, 345, 355A-355B, 355-356, 367, 389I, 391A-391B, 391-392, 393A-393B, 393-394, 395-A-395B, 395-396, 419, 425I, 425J, 465I, 465J, 469A-469B, 469-470, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 479A-479B, 479-480, 485A-485B, 485-486, 493A-493B, 493-494

**Grade 3:** 2I, 2J, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13, 226A-226B, 226-227, 228A-228B, 228-231, 232A-232B, 232-233, 236A-236B, 236-237, 496I, 502A-502B, 502-503, 504A-504B, 504-505, 512A-512B, 512-513, 516A-516B, 516-517, 522A-522B, 522-525, 562I, 564A-564B, 564-565, 566A-566B, 566-567, 704A-704B, 704-707

**Grade 4:** 2I, 2J, 4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 28A-28B, 28-29, 30A-30B, 30-31, 34A-34B, 34-37, 498I, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-507, 516A-516B, 516-519, 520A-520B, 520-521, 530A-530B, 530-533, 624A-624B, 624-627, 628A-628B, 628-629, 658A-658B, 658-661, 664A-664B, 664-665, 686I, 688A-688B, 688-689, 692A-692B, 692-693

## 5.2 Relate mathematical concepts and procedures to other disciplines.

- **Recognize mathematical patterns and ideas in familiar situations in other disciplines.**

**Grade K:** 3B, 5B, 7B, 11B, 15B, 17B, 33B, 35B, 37B, 43B, 45B, 53B, 55B, 57B, 67B, 69B, 77B, 83B, 85B, 87B, 93B, 95B, 103B, 105B, 109B, 111B, 117B, 121B, 125B, 135B, 137B, 139B, 141B, 145B, 147B, 153B, 155B, 161B, 165B, 167B, 169B, 171B, 177B, 185B, 187B, 191B, 197B, 201B, 205B, 207B, 209B, 211B, 213B, 215B, 217B, 227B, 229B, 231B, 235B, 237B, 239B

**Grade 1:** 3B, 5B, 7A, 13B, 15B, 17B, 21B, 27B, 31B, 33B, 45B, 47B, 51B, 53B, 61B, 63B, 67B, 69B, 75B, 77B, 79B, 91B, 97B, 103B, 107B, 127B, 133B, 143B, 161B, 165B, 171B, 173B, 177B, 181B, 183B, 185B, 193B, 205B, 209B, 211B, 215B, 219B, 223B, 229B, 241B, 243B, 245B, 247B, 249B, 251B, 261B, 265B, 291B, 297B, 303B, 307B, 309B, 311B, 313B, 319B, 331B, 335B, 337B, 338B, 343B, 345B, 347B, 353B, 365B, 371B, 377B, 383B, 385B, 387B, 389B, 391B, 395B, 397B, 401B, 405B, 421B, 423B, 431B, 437B, 465B, 467B, 473B, 477B, 481B, 483B

**Grade 2:** 3B, 17B, 25B, 69B, 123B, 135B, 291B, 297B, 299B, 311B, 323B, 327B, 329B, 341B, 343B, 353B, 363B, 391B, 467B, 485B

**Grade 3:** 4B, 10B, 20, 26, 22B, 28B, 30, 36B, 38, 40B, 42B, 44B, 66B, 68, 70B, 72B, 76B, 84, 86B, 88, 90B, 96B, 99, 104B, 128B, 130, 134, 140B, 142, 148B, 150B, 152B, 154, 160B, 162B, 164, 192B, 194, 198B, 200B, 204B, 206, 210, 214, 218B, 220, 228B, 230, 232B, 236B, 260B, 262B, 266B, 270B, 272, 276B, 280B, 290, 292B, 316B, 318B, 332B, 322, 324B, 326, 334, 344B, 346B, 348B, 370B, 372B, 374B, 376, 384B, 392B, 396B, 398B, 400, 430, 428B, 432B, 438, 442B, 450B, 454B, 458, 460B, 452, 456B, 466, 468B, 470, 474B, 498B, 504B, 508, 512B, 518B, 522B, 524, 532B, 534B, 536B, 566B, 568B, 570, 572B, 574, 584B, 588B, 616B, 620, 622B, 628, 630B, 634, 636B, 638B, 640B, 652B, 656B, 680B, 682, 692, 694B, 696B, 700B, 704B, 706

**Grade 4:** 4B, 8B, 9, 18, 30B, 34B, 36, 38B, 66, 68B, 70, 78, 80B, 84, 86B, 90B, 94B, 102B, 126, 130, 134, 140B, 146B, 148B, 162, 166B, 190B, 194, 198B, 200B, 204B, 206B, 208B, 210, 214, 218, 226B, 228, 232B, 258B, 260, 266, 270B, 272, 274B, 280, 282B, 290B, 316B, 318, 322, 326B, 328, 332B, 334, 338B, 340B, 344B, 372B, 374B, 376, 380B, 384B, 392B, 396B, 404B, 408B, 410, 434B, 436, 440B, 442, 446, 452B, 454, 460B, 478B, 500B, 502B, 506, 508B, 512B, 518, 520B, 522B, 524B, 526, 532, 538B, 540B, 564B, 566, 570, 574B, 576, 578B, 580, 584B, 588B, 592B, 596B, 598, 602B, 626, 628B, 630B, 632B, 642B, 644, 652B, 654B, 656B, 660, 662B, 666B, 694, 702, 708

- **Use mathematical thinking and modeling in familiar situations in other disciplines.**

**Grade K:** 3B, 5B, 7B, 11B, 15B, 17B, 33B, 35B, 37B, 43B, 45B, 53B, 55B, 57B, 67B, 69B, 77B, 83B, 85B, 87B, 93B, 95B, 103B, 105B, 109B, 111B, 117B, 121B, 125B, 135B, 137B, 139B, 141B, 145B, 147B, 153B, 155B, 161B, 165B, 167B, 169B, 171B, 177B, 185B, 187B, 191B, 197B, 201B, 205B, 207B, 209B, 211B, 213B, 215B, 217B, 227B, 229B, 231B, 235B, 237B, 239B

**Grade 1:** 3B, 5B, 7A, 13B, 15B, 17B, 21B, 27B, 31B, 33B, 45B, 47B, 51B, 53B, 61B, 63B, 67B, 69B, 75B, 77B, 79B, 91B, 97B, 103B, 107B, 127B, 133B, 143B, 161B, 165B, 171B, 173B, 177B, 181B, 183B, 185B, 193B, 205B, 209B, 211B, 215B, 219B, 223B, 229B, 241B, 243B, 245B, 247B, 249B, 251B, 261B, 265B, 291B, 297B, 303B, 307B, 309B, 311B, 313B, 319B, 331B, 335B, 337B, 338B,

343B, 345B, 347B, 353B, 365B, 371B, 377B, 383B, 385B, 387B, 389B, 391B, 395B, 397B, 401B, 405B, 421B, 423B, 431B, 437B, 465B, 467B, 473B, 477B, 481B, 483B

**Grade 2:** 3B, 17B, 25B, 69B, 123B, 135B, 291B, 297B, 299B, 311B, 323B, 327B, 329B, 341B, 343B, 353B, 363B, 391B, 467B, 485B

**Grade 3:** 4B, 10B, 20, 26, 22B, 28B, 30, 36B, 38, 40B, 42B, 44B, 66B, 68, 70B, 72B, 76B, 84, 86B, 88, 90B, 96B, 99, 104B, 128B, 130, 134, 140B, 142, 148B, 150B, 152B, 154, 160B, 162B, 164, 192B, 194, 198B, 200B, 204B, 206, 210, 214, 218B, 220, 228B, 230, 232B, 236B, 260B, 262B, 266B, 270B, 272, 276B, 280B, 290, 292B, 316B, 318B, 332B, 322, 324B, 326, 334, 344B, 346B, 348B, 370B, 372B, 374B, 376, 384B, 392B, 396B, 398B, 400, 430, 428B, 432B, 438, 442B, 450B, 454B, 458, 460B, 452, 456B, 466, 468B, 470, 474B, 498B, 504B, 508, 512B, 518B, 522B, 524, 532B, 534B, 536B, 566B, 568B, 570, 572B, 574, 584B, 588B, 616B, 620, 622B, 628, 630B, 634, 636B, 638B, 640B, 652B, 656B, 680B, 682, 692, 694B, 696B, 700B, 704B, 706

**Grade 4:** 4B, 8B, 9, 18, 30B, 34B, 36, 38B, 66, 68B, 70, 78, 80B, 84, 86B, 90B, 94B, 102B, 126, 130, 134, 140B, 146B, 148B, 162, 166B, 190B, 194, 198B, 200B, 204B, 206B, 208B, 210, 214, 218, 226B, 228, 232B, 258B, 260, 266, 270B, 272, 274B, 280, 282B, 290B, 316B, 318, 322, 326B, 328, 332B, 334, 338B, 340B, 344B, 372B, 374B, 376, 380B, 384B, 392B, 396B, 404B, 408B, 410, 434B, 436, 440B, 442, 446, 452B, 454, 460B, 478B, 500B, 502B, 506, 508B, 512B, 518, 520B, 522B, 524B, 526, 532, 538B, 540B, 564B, 566, 570, 574B, 576, 578B, 580, 584B, 588B, 592B, 596B, 598, 602B, 626, 628B, 630B, 632B, 642B, 644, 652B, 654B, 656B, 660, 662B, 666B, 694, 702, 708

- **Describe examples of contributions to the development of mathematics *such as the contributions of women, men, and different culture.***

**Grade K:** 69B, 179A-179B, 179, 181A-181B, 181, 183A-183B, 183, 187A-187B, 187

**Grade 1:** 331A-331B, 331-332, 333A-333B, 333-334, 343A-343B, 343-344, 347A-347B, 347-348

**Grade 2:** 123A-123B, 123-124, 130, 462

**Grade 3:** 27, 69, 458, 568B, 585, 587

**Grade 4:** 30B, 166B, 195, 282B, 332B, 340B, 452B, 478-479, 584B, 588, 630B, 652, 656B

**5.3 Relate mathematical concepts and procedures to real-life situations.****• Give examples of how mathematics is used in everyday**

**Grade K:** 3B, 11B, 33B, 35B, 53B, 55B, 67B, 77B, 85B, 95B, 105B, 109B, 117B, 121B, 135B, 147B, 153B, 161B, 169B, 171B, 177B, 187B, 197B, 201B, 207B, 211B, 213B, 227B, 229B, 235B, 237B

**Grade 1:** 3B, 7A, 21B, 27B, 33B, 47B, 55, 56, 61B, 67B, 75B, 97B, 161B, 165B, 173B, 177B, 181B, 193B, 205B, 211B, 219B, 241B, 243B, 245B, 265B, 297B, 313B, 331B, 338B, 345B, 371B, 377B, 385B, 387B, 389B, 401B, 421B, 473B

**Grade 2:** 38, 76, 130, 170, 206, 242, 279B, 286, 313B, 336, 353B, 386, 413B, 422, 462

**Grade 3:** 21, 36A-36B, 36-39, 40A-40B, 40-41, 101, 155, 215, 264, 278, 279, 323, 377, 448, 453, 500, 525, 575, 614, 629, 654, 707

**Grade 4:** 19, 30A-30B, 30-31, 32A-32B, 32-33, 67, 163, 215, 335, 370, 382, 383, 388, 447, 466, 470, 507, 571, 627, 640, 703

**• Identify how mathematics is used in career settings.**

**Grade K:** 4A-F, 7A-7F, 9A-9F

**Grade 1:** 11A-11F, 120, 152, 447A-447B, 447-448, 484, 490

**Grade 2:** 4A-4F, 225, 415A-415B, 415-416, 422, 448, 489A-489B, 489-490

**Grade 3:** 101, 104-105, 406-407

**Grade 4:** 447, 478-479, 602-603, 716-717

**Scott Foresman – Addison Wesley Mathematics  
to the  
Washington  
Essential Academic Learning Requirements – Mathematics  
Grades 5 & 6**

**1. The student understands and applies the concepts and procedures of mathematics.**

*To meet this standard, the student will:*

**Benchmark 2**

**1.1 Understand and apply concepts and procedures from number sense.**

**Number and Numeration**

- **Demonstrate understanding of integers, fractions, decimals, percents, place value of decimals, and properties of the rational number system using pictures and symbols.**
  - Grade 5:** 2I, 2, 4A-4B, 4-5, 7, 8A-8B, 8-11, 13, 14A-14B, 14-17, 20, 21, 25, 39, 50, 56, 57, 60, 61, 392I, 392J, 394A-394B, 394-397, 398A-398B, 398-399, 400A-400B, 400-401, 403, 404A-404B, 404-405, 408, 409, 410A-410B, 410-411, 412A-412B, 412-413, 415, 416A-416B, 416-417, 419, 423, 424, 425, 426A-426B, 426-429, 430A-430B, 430-431, 437, 440, 442, 444, 446, 447, 448, 450, 451, 452, 453, 454, 455, 456, 457, 688A-688B, 668-669, 678, 679, 690, 712A-712B, 712-715, 717, 722, 723, 736, 738, 739, 746
  - Grade 6:** 2, 4A-4B, 4-7, 9, 11, 13, 17, 19, 22, 23, 29, 60, 62, 63, 64, 66, 70, 76A-76B, 76-77, 79, 84, 85, 113, 119, 132, 136, 140J, 160A-160B, 160-163, 167, 168A-168B, 168-169, 171, 172A-172B, 172-175, 179, 184, 185, 186, 187, 188, 189, 190, 191, 192, 195, 196, 197, 199, 200, 201, 202, 352, 354A-354B, 354-357, 358A-358B, 358-361, 364, 365, 367, 377, 394, 396, 397, 400, 403, 408A-408B, 408-409, 411, 412A-412B, 412-413, 416, 417, 456, 458, 459, 462, 466
- **Compare and order integers, fractions, and decimals.**
  - Grade 5:** 6A-6B, 6-7, 11, 12A-12B, 12-13, 17, 20, 21, 27, 39, 48, 49, 52, 53, 54, 56, 60, 410A-410B, 410-411, 412A-412B, 412-413, 415, 416A-416B, 416-417, 418A-418B, 418-419, 420A-420B, 420-423, 424, 425, 426A-426B, 426-429, 430A-430B, 430-433, 437, 440, 441, 444, 445, 446, 447, 448, 450, 451, 452, 453, 454, 455, 456, 457, 458I, 458, 459, 668A-668B, 668-669, 678, 679, 684, 686, 712A-712B, 712-715, 717, 719, 722, 723, 736, 738, 740, 743, 746

**Grade 6:** 3, 12A-12B, 12-13, 15, 22, 23, 58, 62, 64, 66, 70, 74, 78A-78B, 78-79, 81, 84, 85, 126, 128, 132, 136, 141, 164A-164B, 164-167, 168A-168B, 168-169, 171, 172A-172B, 172-175, 176A-176B, 176-179, 184, 185, 188, 189, 190, 191, 192, 196, 197, 199, 200, 201, 406I, 410A-410B, 410-411, 413, 416, 417, 425, 437, 456, 458, 459, 460, 462, 466

- **Understand the concepts of prime and composite numbers, factors and multiples, and divisibility rules.**

**Grade 5:** 162A-162B, 162-163, 164A-164B, 164-167, 170, 171, 186, 188, 189, 194, 198, 414A-414B, 414-415, 417, 419, 424, 425, 437, 445, 447, 452, 456

**Grade 6:** 140I, 142A-142B, 142-145, 145A-146B, 146-149, 150A-150B, 150-151, 152A-152B, 152-155, 158, 159, 163, 169, 188, 190, 191, 192, 194, 195, 198, 199

- **Understand and apply the concepts of ratio and direct proportion.**

**Grade 5:** 646A-646B, 646-647, 648A-648B, 648-651, 652A-652B, 652-653, 654A-654B, 654-655, 656, 657, 662A-662B, 662-663, 664A-664B, 664-665, 666, 667, 668A-668B, 668-669, 678, 679, 682, 683, 686, 688, 689, 690, 691, 692, 693

**Grade 6:** 298I, 298J, 300A-300B, 300-301, 302A-302B, 302-305, 306A-306B, 306-309, 314, 315, 316A-316B, 316-317, 318A-318B, 318-321, 322A-322B, 322-323, 326, 327, 329, 330A-330B, 330-333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 345, 346, 347, 348, 349, 350, 351

### Computation

- **Understand operations on nonnegative rational numbers.**

**Grade 5:** 2J, 22A-22B, 22-25, 27, 34, 35, 36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 46, 47, 50, 51, 52, 53, 57, 58, 59, 61, 62, 63, 64J, 64, 65, 66A-66B, 66-67, 69, 70A-70B, 70-71, 72A-72B, 72-75, 76A-76B, 76-77, 82, 83, 84A-84B, 84-85, 87, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 98, 99, 103, 116, 118, 119, 122, 123, 124, 126, 127, 128, 130J, 130, 132A-132B, 132-135, 136A-136B, 136-137, 141, 146, 147, 148A-148B, 148-151, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 163, 168A-168B, 168-169, 170, 171, 172A-172B, 172-173, 179, 182, 186, 187, 188, 189, 190, 192, 193, 194, 195, 196, 197, 198, 199, 200I, 200J, 200, 201, 202A-202B, 202-203, 212, 213, 214A-214B, 214-217, 218A-218B, 218-221, 222A-222B, 222-223, 224A-224B, 224-225, 228, 229, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 240, 241, 244, 245, 246, 247, 250, 251, 252, 253, 254, 255, 256, 257, 458J, 460A-460B, 460-461, 462A-462B, 462-463, 465, 466A-466B, 466-469, 470, 471, 472A-472B, 472-473, 475, 476A-476B, 476-477,

478A-478B, 478-481, 487, 488, 489, 490A-490B, 490-493, 495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-505, 508, 509, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522, 523, 524, 525, 527, 670A-670B, 670-671, 674, 678, 679, 683, 684, 685, 686, 690, 693, 716A-716B, 716, 717, 718A-718B, 718, 719, 722, 727, 746

**Grade 6:** 24A-24B, 24-26, 29, 30A-30B, 30-31, 32A-32B, 32-37, 38, 39, 43, 51, 60, 62, 63, 67, 68, 72, 74I, 74J, 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 104, 105, 106A-106B, 106-109, 111, 119, 126, 128, 130, 133, 134, 137, 138, 141, 202I, 202J, 203, 204A-204B, 204-205, 206A-206B, 206-209, 214, 215, 217, 218A-218B, 218-219, 220A-220B, 220-223, 224A-224B, 224-225, 230, 231, 234, 235, 236, 237, 239, 240, 241, 242, 243, 244, 245, 246I, 246J, 246, 248A-248B, 248-251, 252A-252B, 252-255, 257, 258A-258B, 258-259, 260, 261, 266A-266B, 266-269, 270A-270B, 270-271, 272, 273, 275, 286, 288, 289, 290, 292, 293, 294, 295, 296, 297, 299, 352I, 352J, 353, 366A-366B, 366-367, 369, 370A-370B, 370, 371, 377, 378, 379, 385, 394, 396, 397, 398, 401, 404, 406J, 406, 418A-418B, 420, 422A-422B, 424, 425, 426A-426B, 426, 427, 428A-428B, 428, 429, 431, 437, 438, 463, 467, 470, 530, 619, 686, 734

- **Add, subtract, multiply, and divide nonnegative fractions and decimals using rules for order of operation.**

**Grade 5:** 2J, 38A-38B, 38-39, 40A-40B, 40-41, 46, 47, 50, 52, 53, 59, 63, 64J, 87, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 98, 99, 103, 116, 118, 119, 123, 124, 127, 128, 160A-160B, 160-161, 163, 170, 171, 179, 188, 189, 194, 196, 198, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 240, 241, 245, 246, 247, 253, 254, 257, 458J, 460A-460B, 460-461, 462A-462B, 462-463, 465, 466A-466B, 466-469, 470, 471, 472A-472B, 472-473, 475, 476A-476B, 476-477, 478A-478B, 478-481, 487, 488, 489, 490A-490B, 490-493, 495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-505, 508, 509, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522, 523, 524, 525, 527

**Grade 6:** 74I, 74J, 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 104, 105, 106A-106B, 106-109, 111, 119, 126, 128, 130, 133, 134, 137, 138, 141, 202I, 202J, 203, 204A-204B, 204-205, 206A-206B, 206-209, 214, 215, 217, 218A-218B, 218-219, 220A-220B, 220-223, 224A-224B, 224-225, 230, 231, 234, 235, 236, 237, 239, 240, 241, 242, 243, 244, 245, 246I, 246J, 248A-248B, 248-251, 252A-252B, 252-255, 257, 258A-258B, 258-259, 260, 261, 266A-266B, 266-269, 270A-270B, 270-271, 272, 273, 275, 286, 288, 289, 290, 292, 293, 294, 295, 296, 297



- **Use mental arithmetic, pencil and paper, calculator, or computer as appropriate to the task involving nonnegative rational numbers.**

**Grade 5:** 2J, 22A-22B, 22-25, 27, 34, 35, 36A-36B, 36-37, 38A-38B, 38-39, 40A-40B, 40-41, 46, 47, 50, 51, 52, 53, 57, 58, 59, 61, 62, 63, 64J, 64, 65, 66A-66B, 66-67, 69, 70A-70B, 70-71, 72A-72B, 72-75, 76A-76B, 76-77, 82, 83, 84A-84B, 84-85, 87, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 98, 99, 103, 116, 118, 119, 122, 123, 124, 126, 127, 128, 130J, 130, 132A-132B, 132-135, 136A-136B, 136-137, 141, 146, 147, 148A-148B, 148-151, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-161, 163, 168A-168B, 168-169, 170, 171, 172A-172B, 172-173, 179, 182, 186, 187, 188, 189, 190, 192, 193, 194, 195, 196, 197, 198, 199, 200I, 200J, 200, 201, 202A-202B, 202-203, 212, 213, 214A-214B, 214-217, 218A-218B, 218-221, 222A-222B, 222-223, 224A-224B, 224-225, 228, 229, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 240, 241, 244, 245, 246, 247, 250, 251, 252, 253, 254, 255, 256, 257, 458J, 460A-460B, 460-461, 462A-462B, 462-463, 465, 466A-466B, 466-469, 470, 471, 472A-472B, 472-473, 475, 476A-476B, 476-477, 478A-478B, 478-481, 487, 488, 489, 490A-490B, 490-493, 495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 504A-504B, 504-505, 508, 509, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522, 523, 524, 525, 527, 670A-670B, 670-671, 674, 678, 679, 683, 684, 685, 686, 690, 693, 716A-716B, 716, 717, 718A-718B, 718, 719, 722, 727, 746

**Grade 6:** 24A-24B, 24-26, 29, 30A-30B, 30-31, 32A-32B, 32-37, 38, 39, 43, 51, 60, 62, 63, 67, 68, 72, 74I, 74J, 86A-86B, 86-89, 90A-90B, 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 104, 105, 106A-106B, 106-109, 111, 119, 126, 128, 130, 133, 134, 137, 138, 141, 202I, 202J, 203, 204A-204B, 204-205, 206A-206B, 206-209, 214, 215, 217, 218A-218B, 218-219, 220A-220B, 220-223, 224A-224B, 224-225, 230, 231, 234, 235, 236, 237, 239, 240, 241, 242, 243, 244, 245, 246I, 246J, 246, 248A-248B, 248-251, 252A-252B, 252-255, 257, 258A-258B, 258-259, 260, 261, 266A-266B, 266-269, 270A-270B, 270-271, 272, 273, 275, 286, 288, 289, 290, 292, 293, 294, 295, 296, 297, 299, 352I, 352J, 353, 366A-366B, 366-367, 369, 370A-370B, 370, 371, 377, 378, 379, 385, 394, 396, 397, 398, 401, 404, 406J, 406, 418A-418B, 420, 422A-422B, 424, 425, 426A-426B, 426, 427, 428A-428B, 428, 429, 431, 437, 438, 463, 467, 470, 530, 619, 686, 734

### **Estimation**

- **Identify situations involving nonnegative rational numbers in which estimation is sufficient and computation is not required.**

**Grade 5:** 26A-26B, 26-27, 28A-28B, 28-31, 34, 35, 37, 52, 53, 58, 59, 61, 62, 64I, 65, 68A-68B, 68-69, 71, 75, 82, 83, 86A-86B, 86-87, 89, 91, 93, 98, 99, 119, 120, 122, 124, 126, 127, 130I, 130J, 131, 138A-138B, 138-141, 146, 147, 159, 173, 189, 192, 196, 204A-204B, 204-207, 212, 213, 225, 244, 247, 250, 254,

402A-402B, 402-403, 405, 408, 409, 411, 446, 450, 454, 474A-474B, 474-475, 477, 479, 487, 488, 489, 494A-494B, 494-495, 499, 508, 509, 511, 513, 514, 515, 519, 520, 523, 524, 525, 624A-624B, 624-625, 628, 672A-672B, 672-675, 676A-676B, 676, 677, 678, 679, 683, 684, 690, 693

**Grade 6:** 2I, 3, 14A-14B, 14-15, 16A-16B, 16-17, 18A-18B, 18-19, 22, 23, 27, 31, 47, 52, 63, 64, 66, 67, 70, 71, 75, 80A-80B, 80-81, 82A-82B, 82-83, 84, 85, 89, 93, 113, 119, 126, 128, 129, 130, 132, 136, 137, 170A-170B, 170-171, 184, 200, 216A-216B, 216-217, 219, 223, 226A-226B, 226-227, 230, 231, 235, 236, 237, 238, 241, 244, 256A-256B, 256-257, 259, 260, 261, 281, 284, 285, 288, 289, 290, 292, 295, 319, 368A-368B, 368-369, 371, 378, 379, 381, 387, 388, 389, 393, 394, 396, 398, 401, 404

- **Use estimation to predict computation results and to determine the reasonableness of answers involving nonnegative rational numbers, for example, estimating a tip.**

**Grade 5:** 28A-28B, 28-31, 34, 35, 37, 52, 53, 58, 59, 62, 68A-68B, 68-69, 71, 75, 82, 83, 86A-86B, 86-87, 88A-88B, 88, 91, 93, 94A-94B, 94, 95, 98, 99, 118, 119, 120, 122, 124, 126, 127, 138A-138B, 138-141, 146, 147, 152A-152B, 152-155, 156A-156B, 156-157, 158A-158B, 158-159, 160A-160B, 160-160, 189, 192, 193, 194, 196, 204A-204B, 204-207, 212, 213, 225, 244, 247, 250, 251, 252, 253, 254, 402A-402B, 402-403, 474A-474B, 474-475, 477, 479, 487, 488, 489, 494A-494B, 494-495, 499, 508, 509, 513, 514, 515, 519, 520, 523, 524, 525, 624A-624B, 624-625, 628, 672A-672B, 672-675, 678, 679, 683, 684, 690, 693

**Grade 6:** 2I, 16A-16B, 16-17, 18A-18B, 18-19, 22, 23, 47, 52, 63, 64, 67, 71, 75, 82A-82B, 82-83, 84, 85, 86A-86B, 86, 87, 88, 89, 90A-90B, 91, 94A-94B, 94, 95, 100A-100B, 101, 103, 113, 119, 126, 128, 129, 130, 132, 133, 134, 137, 216A-216B, 216-217, 219, 223, 226A-226B, 226-227, 230, 231, 235, 236, 237, 241, 244, 256A-256B, 256-257, 259, 260, 261, 281, 284, 285, 288, 289, 290, 292, 295, 319, 368A-368B, 368-369, 371, 378, 379, 381, 387, 388, 389, 393, 394, 396, 398, 401, 404

## 1.2 Understand and apply concepts and procedures from measurement.

### Attributes and Dimensions

- **Understand the concepts of and the relationships among perimeter, area, and volume and how changes in one dimension affect perimeter, area, and/or volume.**

**Grade 5:** 526I, 526J, 540A-540B, 540-541, 542A-542B, 542-545, 546, 547, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557, 558A-558B, 558-559, 560, 561, 563, 576, 577, 578, 579, 580, 581, 582,

585, 586, 588, 589, 590, 592J, 593, 597, 602A-602B, 602-603, 608, 609, 610A-610B, 610-613, 615, 618, 619, 623, 629, 632, 633, 634, 635, 636, 638, 639, 641, 642

**Grade 6:** 540I, 540J, 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 584, 585, 590A-590B, 590-593, 594A-594B, 594-597, 600, 601, 604, 605, 606, 607, 608, 611, 612, 613, 615, 616, 617

- **Measure objects and events directly or using indirect methods *such as calculating and applying procedures for determining perimeter, area, and volume.***

**Grade 5:** 526I, 526J, 540A-540B, 540-541, 542A-542B, 542-545, 546, 547, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557, 558A-558B, 558-559, 560, 561, 563, 576, 577, 578, 579, 580, 581, 582, 585, 586, 588, 589, 590, 592J, 593, 597, 602A-602B, 602-603, 608, 609, 610A-610B, 610-613, 615, 618, 619, 623, 629, 632, 633, 634, 635, 636, 638, 639, 641, 642, 662A-662B, 662-663, 666, 667, 684, 689, 692

**Grade 6:** 330A-330B, 330-333, 336, 337, 476A-476B, 476-479, 492, 493, 532, 536, 540I, 540J, 542A, 542B, 550A, 550B, 550, 552A, 552, 562, 563, 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 584, 585, 590A-590B, 590-593, 594A-594B, 594-597, 600, 601, 604, 605, 606, 607, 608, 611, 612, 613, 615, 616, 617

- **Understand the concept of rate and how to calculate rates and determine units.**

**Grade 5:** 654A-654B, 654-655, 656, 657, 662A-662B, 662-663, 666, 667, 684, 685, 689, 692

**Grade 6:** 306A-306B, 306-309, 314, 315, 328A-328B, 328, 329, 333, 336, 337, 340, 342, 343, 345, 346, 348, 349, 351

### **Approximation and Precision**

- **Understand that precision is related to the unit of measurement used and the calibration of the measurement tool.**

**Grade 5:** 528A-528B, 531, 532A-532B, 532, 533, 534A-534B, 534, 535, 564A-564B, 565, 566, 568A-568B, 568, 569, 570A-570B, 570, 571, 574, 575, 580, 585, 587, 588, 591, 614A-614B, 614, 615, 616A-616B, 616, 617, 618, 620A-620B, 620, 622A-622B, 622, 623, 631, 644I

**Grade 6:** 476A-476B, 476-479, 492, 493, 531, 532, 536, 722A-722B, 722-723

- **Know when to estimate and use estimation to obtain reasonable approximations, for example, estimating the length and width of the playground to approximate its area.**  
**Grade 5:** 529, 532A-532B, 532, 533, 534A-534B, 534, 535, 537, 538, 541, 542A-542B, 542, 544, 545, 546, 547, 551, 570A-570B, 570, 571, 577, 584, 585, 588, 589, 615, 617, 621, 624A-624B, 624-625, 626, 627, 628, 629, 633, 640, 643  
**Grade 6:** 226A-226B, 227, 230, 231, 238, 478, 483, 540I, 550, 551, 552A-552B, 552-553, 566, 573, 576A-576B, 576, 577, 578, 579, 580A-580B, 580, 581, 590A-590B, 591, 592, 594A-594B, 595, 596, 598A-598B, 599, 600, 601, 607, 610, 612, 613, 614, 616, 617

### Systems and Tools

- **Understand the appropriate uses of standard units of measurement for both direct and indirect measurement.**  
**Grade 5:** 528A-528B, 528-531, 532A-532B, 532-533, 534A-534B, 534-535, 536A-536B, 536-539, 546, 547, 562A-562B, 562-563, 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 574, 575, 580, 581, 584, 587, 588, 591, 614A-614B, 614-615, 616A-616B, 616-617, 618, 619, 620A-620B, 620-621, 622A-622B, 622-623, 628, 629, 633, 635, 639, 642, 662A-662B, 662-663, 666, 667, 684, 689, 692, 644I  
**Grade 6:** 330A-330B, 330-333, 476A-476B, 476-479, 492, 493, 532, 536, 540I, 542A-542B, 542-545, 546A-546B, 546-549, 550A-550B, 550-551, 553, 557, 562, 563, 604, 607, 610, 614
- **Understand the relationship among units within both the U.S. and metric systems.**  
**Grade 5:** 528A-528B, 528-531, 532A-532B, 532-533, 534A-534B, 534-535, 536A-536B, 536-539, 541, 546, 547, 562A-562B, 562-563, 567, 574, 575, 578, 580, 581, 582, 584, 587, 588, 591, 614A-614B, 614-615, 616A-616B, 616-617, 618, 619, 620A-620B, 620-621, 622A-622B, 622-623, 628, 629, 633, 635, 639, 640, 642, 643, 755  
**Grade 6:** 542A-542B, 542-545, 546A-546B, 546-549, 551, 562, 563, 604, 606, 607, 610, 614, 749

- **Select and use tools that will provide an appropriate degree of precision, for example, using meters vs. kilometer.**

**Grade 5:** 532A-532B, 532, 533, 534A-534B, 534, 535, 542A-542B, 542, 546, 564A-564B, 565, 566, 568A-568B, 568, 569, 570A-570B, 570, 571, 574, 575, 580, 584, 587, 588, 591, 614A-614B, 614, 615, 616A-616B, 616, 617, 618, 620A-620B, 620, 622A-622B, 622, 628, 630, 642, 643, 644I

**Grade 6:** 476A-476B, 476-479, 492, 493, 532, 536, 540I, 542A, 542B, 546A, 550A, 550B, 550, 551, 552A, 562, 563, 568, 572B, 576A, 576B, 576, 590B, 610, 614, 696I

### 1.3 Understand and apply concepts and procedures from geometric sense.

#### Properties and Relationships

- **Use the properties and relationships of plane geometry to describe shapes and figures, including angles, degrees in a circle, triangles, isosceles, equilateral, or quadrilateral.**

**Grade 5:** 326I, 326J, 328A-328B, 328-331, 332A-332B, 332-335, 336A-336B, 336-337, 338, 339, 340A-340B, 340-342, 342A-342B, 342-345, 346A-346B, 346-349, 351, 355, 388, 389, 39

**Grade 6:** 470I, 470J, 476A-476B, 476-479, 480A-480B, 480-483, 484A-484B, 484-487, 492, 493, 494A-494B, 494-495, 496A-496B, 496-499, 500A-500B, 500-501, 502A-502B, 502-503, 504, 505, 509, 512A-512B, 512, 513, 526, 528, 529, 530, 532, 533, 534, 536, 537, 538, 539

- **Identify, describe, or draw objects in the surrounding environment in geometric terms, for example, producing a simple scale drawing of a classroom.**

**Grade 5:** 328A-328B, 328, 330, 332A-332B, 332, 334, 336A-336B, 337, 339, 340A-34B, 340, 342A-342B, 342, 344, 346A-346B, 348, 351, 352A-352B, 352, 360, 364, 368, 372, 373, 594A-594B, 595, 596, 597, 598A-598B, 600, 602A-602B, 602, 603, 605, 634, 638, 641, 662A-662B, 662-663

**Grade 6:** 330A-330B, 330-333, 336, 337, 351, 472, 475, 478, 486, 489, 490, 494, 498, 499, 500, 502, 503, 513, 514, 515, 516, 521, 525, 545, 564, 567, 569, 571, 574, 576, 577, 578, 581, 586, 587, 590, 592, 596, 598, 599, 603

- **Understand symmetry, congruence, and similarity.**

**Grade 5:** 360A-360B, 360-363, 364A-364B, 364-367, 368A-368B, 368-371, 374, 375, 377, 379, 381, 386, 387, 390, 391

**Grade 6:** 470J, 506A-506B, 506-509, 510A-510B, 510-511, 514A-514B, 514-515, 516A-516B, 516-519, 522, 523, 524, 525, 527, 528, 529, 534, 535, 538, 539

- **Perform geometric constructions using a variety of tools and technologies such as paper folding, computer software, straightedge, compass.**  
**Grade 5:** 340, 343, 346, 349, 363, 367, 368, 369, 371, 607  
**Grade 6:** 484A-484B, 484-487, 494A-494B, 494, 495, 496A-496B, 496, 497, 498, 499, 500A-500B, 501, 502A-502B, 501, 502, 509, 510A-510B, 510, 511, 512A-512B, 512, 514A-514B, 515, 516A-516B, 516, 517, 518, 519, 524, 525, 529, 532, 535, 537, 539, 540J

### **Locations and transformations**

- **Identify and describe location of objects on coordinate grids in any of the four quadrants.**  
**Grade 5:** 174A-174B, 174-175, 176A-176B, 176, 177, 182, 183, 185, 187, 188, 191, 195, 199, 694J, 724A-724B, 724-727, 728A-728B, 728, 729, 732, 733, 734, 735, 737, 739, 744, 747  
**Grade 6:** 440A-440B, 440-443, 447, 452, 453, 457, 458, 465, 469, 471, 510A-510B, 510-511, 512A-512B, 512, 513, 524, 525, 530
- **Understand and apply simple geometric transformations using combinations of translations (slides), or reflections (flips), or rotations (turns).**  
**Grade 5:** 364A-364B, 364-367, 374, 375, 379, 381, 382, 387, 391  
**Grade 6:** 470J, 510A-510B, 510-511, 512A-512B, 512, 513, 515, 516A-516B, 516-519, 522, 523, 524, 525, 527, 528, 529, 534, 535, 539

## **1.4 Understand and apply concepts and procedures from probability and statistics.**

### **Probability**

- **Know how to calculate numerical measures of chance for simple events.**  
**Grade 5:** 258J, 302A-302B, 302-305, 308, 309, 313, 315, 317, 321, 325  
**Grade 6:** 662A-662B, 662-663, 664A-664B, 664, 665, 666, 667, 668A-668B, 668, 669, 670, 671, 672A-672B, 672, 673, 678, 679, 680, 681, 683, 685, 687, 690, 691, 694, 695
- **Understand procedures for counting outcomes to determine probabilities.**  
**Grade 5:** 258J, 302A-302B, 302-305, 308, 309, 325  
**Grade 6:** 618J, 654A-654B, 654-657, 662A-662B, 662-663, 664A-664B, 665, 671, 678, 679, 683, 685, 690, 694

- **Know how to conduct experiments and simulations and to compare results with mathematical expectations.**  
**Grade 5:** 258J, 296A-296B, 297, 299, 300A-300B, 301, 302A-302B, 302, 304, 305  
**Grade 6:** 654A-654B, 654-657, 658A-658B, 658, 659, 662A-662B, 662, 664A-664B, 665, 671, 683, 690, 694

### **Statistics**

- **Collect a random sample of data that represents a described population.**  
**Grade 5:** 260A-260B, 260-261, 269  
**Grade 6:** 618I, 620A-620B, 621, 661
- **Organize and display data in appropriate forms such as frequency tables, circle graphs, and stem-and-leaf plots.**  
**Grade 5:** 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-273, 276A-276B, 276-279, 280, 281, 285, 286A-286B, 286-287, 288A-288B, 288-291, 294, 295, 296A-296B, 297, 299, 300A-300B, 301, 302A-302B, 305, 308, 309, 310, 311, 312, 315, 318, 319, 320, 321, 322, 323, 324, 325, 644I  
**Grade 6:** 618I, 618J, 627, 628A-628B, 628-631, 632A-632B, 632-633, 634, 635, 636A-637B, 636-637, 638A-638B, 638-641, 642A-642B, 642-645, 646-647, 648A-648B, 648-649, 652, 653, 661, 665, 678, 679, 682, 684, 685, 687, 688, 689, 692, 693, 694, 695
- **Calculate and appropriately use range and measures of central tendency to describe data.**  
**Grade 5:** 258I, 270A-270B, 271, 272, 282A-282B, 282-285, 287, 294, 295, 311, 312, 314, 315, 317, 319, 323  
**Grade 6:** 624A-624B, 624-627, 628A-628B, 629, 630, 631, 632A-632B, 633, 634, 635, 676, 677, 682, 684, 685, 687, 688, 692
- **Identify how statistics can be used to support different points of view.**  
**Grade 5:** 258I, 260A-260B, 260-261, 262A-262B, 263, 264, 266A-266B, 267, 268, 269, 282A-282B, 282-285, 288A-288B, 288-291, 294, 295, 318, 322  
**Grade 6:** 618I, 624A-624B, 624-627, 628A-628B, 628-631, 632A-632B, 632-633, 634, 635, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-645, 646-647, 648A-648B, 648-649, 650A-650B, 650, 651, 652, 653, 682, 684, 685, 687, 688, 689, 690, 692, 693, 694

**Prediction and Inference**

- **Predict outcomes of experiments and simulations and compare the predictions to experimental results.**  
**Grade 5:** 208-209, 210A-210B, 210-211, 258J, 292A-292B, 292-293, 296A-296B, 296-299, 308, 309, 311, 314, 320, 324  
**Grade 6:** 618I, 664A-664B, 664-667, 671, 677, 678, 679, 691, 695, 704-705, 706A-706B, 706-707, 708, 709, 731, 733, 736, 739
- **Understand and make inferences based on analysis of experimental results, statistical data, and simple graphical representations.**  
**Grade 5:** 144A-144B, 144-145, 146, 192, 196, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 276A-276B, 276-279, 280, 281, 286A-286B, 286-287, 288A-288B, 289, 290, 291, 292A-292B, 292-293, 294, 295, 296A-297B, 297, 299, 302A-302B, 304, 311, 312, 313, 315, 316, 317, 318, 319, 320, 322, 323, 324, 644I, 660A-660B, 660-661, 667, 680, 681, 683, 690, 692  
**Grade 6:** 156A-156B, 156-157, 210-211, 212A-212B, 212-213, 214, 217, 223, 232, 233, 234, 237, 239, 240, 243, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 618J, 664A-664B, 664-667, 671, 677, 678, 679, 691, 695, 696I, 696J, 716A-716B, 716-717, 733, 737, 741

**1.5 Understand and apply concepts and procedures from algebraic sense.****Patterns**

- **Recognize, extend, and create patterns and sequences.**  
**Grade 5:** 14A-14B, 14-17, 66A-66B, 66-67, 75, 84A-84B, 84-85, 106A-106B, 106-107, 109, 112, 113, 117, 118, 119, 121, 125, 129, 136A-136B, 136-137, 141, 142-143, 144A-144B, 144-145, 146, 147, 157, 176A-176B, 176-179, 182, 183, 187, 188, 189, 191, 192, 195, 196, 199, 558, 660-661, 694J, 728A-728B, 728-729, 732, 733, 737, 739, 741, 744, 747  
**Grade 6:** 51, 154-155, 156A-156B, 156-157, 158, 159, 163, 189, 191, 193, 195, 199, 210-211, 212A-212B, 212-213, 214, 215, 232, 233, 234, 237, 239, 240, 243, 251, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 454, 455, 457, 459, 461, 465, 469, 490A-490B, 490, 491, 513, 535, 539, 696I, 696J, 716A-716B, 716-717, 718A-718B, 718-721, 726, 727, 728, 729, 730, 732, 733, 735, 737, 738, 741



- **Represent and describe patterns with tables, graphs, and rule.**

**Grade 5:** 106A-106B, 106-107, 109, 112, 113, 118, 119, 125, 129, 142, 143, 144A-144B, 144-145, 146, 176A-176B, 176-179, 182, 183, 187, 188, 191, 192, 195, 196, 199, 644I, 694J, 728A-728B, 728-729, 732, 733, 737, 739, 741, 744, 747

**Grade 6:** 51, 154-155, 156A-156B, 156-157, 158, 159, 163, 189, 191, 193, 195, 199, 210-211, 212A-212B, 212-213, 214, 215, 232, 233, 234, 237, 239, 240, 243, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 454, 455, 457, 459, 461, 465, 469, 513, 539, 696I, 696J, 716A-716B, 716-717, 718A-718B, 718-721, 726, 727, 728, 729, 730, 732, 733, 735, 737, 738, 741

### Representations

- **Represent equalities and inequalities symbolically using =, >, <, ≤, ≥.**

**Grade 5:** 6A-6B, 7, 12A-12B, 13, 21, 53, 56, 60, 100A-100B, 100-103, 104A-104B, 104-105, 107, 108A-108B, 109, 112, 113, 418A-418B, 418, 419, 420A-420B, 422, 423, 424, 425, 445, 447, 452, 456, 694J, 700A-700B, 700, 702A-702B, 702, 703, 704, 705, 706A-706B, 706-709, 710, 711, 715, 737, 738, 739, 743, 745, 712A-712B, 713, 714, 717, 719, 722, 723, 738, 743, 746

**Grade 6:** 12A-12B, 12-13, 54, 58, 65, 66, 70, 74, 78A-78B, 78, 79, 81, 84, 85, 116A-116B, 116-118, 122, 123, 127, 128, 129, 132, 135, 136, 139, 141, 145, 176A-176B, 176, 177, 178, 185, 189, 191, 201, 351, 410A-410B, 410, 411, 412A-412B, 412, 413, 416, 432, 444A-444B, 445, 446, 449, 452, 453, 455, 459, 462, 466, 696, 698A-698B, 698-699, 700A-700B, 700-703, 708, 709, 716A-716B, 716-717, 727, 733, 735

- **Use variables to write simple expressions, equations, and inequalities, for example,  $3x > 18$ .**

**Grade 5:** 100A-100B, 100-103, 104A-104B, 104-105, 107, 108A-108B, 109, 112, 113, 694J, 700A-700B, 700, 702A-702B, 702, 703, 704, 705, 706A-706B, 706-709, 710, 711, 715, 737, 738, 739, 743, 745

**Grade 6:** 2J, 40A-40B, 40-43, 47, 54, 56, 57, 62, 63, 65, 69, 73, 116A-116B, 116-119, 122, 123, 127, 128, 129, 131, 135, 139, 145, 212A-212B, 213, 251, 274A-274B, 274-275, 277, 282, 283, 287, 288, 289, 291, 294, 297, 432, 444A-444B, 445, 446, 449, 452, 453, 455, 459, 461, 716A-716B, 716-717, 732, 733, 735, 740

## Operations

- **Evaluate expressions and formulas.**

**Grade 5:** 100A-100B, 100-103, 107, 112, 113, 119, 125, 128, 176A-176B, 176-179, 182, 183, 187, 188, 191, 195, 199, 540A-540B, 540-541, 542A-542B, 542-545, 546, 547, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-555, 560, 561, 578, 579, 580, 581, 582, 585, 586, 588, 589, 590, 60A-610B, 610-613, 615, 618, 619, 632, 634, 635, 636, 638, 639, 641, 642,

**Grade 6:** 11, 13, 24A-24B, 24-26, 29, 35, 39, 40A-40B, 41, 42, 43, 47, 51, 56, 57, 60, 62, 63, 65, 67, 68, 69, 71, 72, 73, 93, 109, 119, 193, 223, 274A-274B, 274-275, 282, 283, 287, 289, 291, 297, 328A-328B, 328-329, 333, 336, 337, 340, 342, 343, 345, 348, 351, 386A-386B, 386-387, 390, 391, 395, 396, 397, 399, 402, 405, 418, 420, 424, 425, 427, 429, 431, 439, 443, 447, 460, 563A-563B, 564-567, 568A-568B, 568-569, 571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 584, 585, 590A-590B, 590-593, 594A-594B, 594-597, 600, 601, 604, 605, 606, 607, 608, 611, 612, 613, 615, 616, 617, 662A-662B, 662-663, 696I, 722A-722B, 722-723, 726, 727, 731, 734, 738, 741

- **Solve single-variable equations.**

**Grade 5:** 108A-108B, 108-109, 112, 113, 117, 119, 125, 129, 135, 137, 175, 191, 249, 383, 449, 517, 637, 687, 694I, 700A-700B, 700-701, 702A-702B, 702-705, 706A-706B, 706-709, 710, 711, 720, 736, 737, 738, 739, 741, 742, 743, 745

**Grade 6:** 48A-48B, 48-51, 56, 57, 61, 62, 63, 65, 69, 73, 75, 77, 83, 97, 112A-112B, 112-113, 116A-116B, 116, 117, 118, 119, 122, 123, 127, 128, 129, 131, 135, 139, 145, 179, 193, 225, 239, 247, 276A-276B, 276-277, 282, 283, 287, 288, 289, 291, 297, 299, 301, 318A-318B, 318-320, 322A-322B, 322-323, 326, 327, 329, 330A-330B, 331, 340, 341, 342, 344, 345, 347, 348, 350, 407, 430A-430B, 430-431, 437, 438, 439, 443, 456, 458, 459, 461, 464, 468, 471, 619, 697, 712A-712B, 712-715, 717, 726, 727, 730, 732, 733, 735, 737, 740

## 2. The student uses mathematics to define and solve problems.

*To meet this standard, the student will:*

### 2.1 Investigate situations

- **Search systematically for patterns in simple situations.**

**Grade 5:** 14A-14B, 14-17, 66A-66B, 66-67, 75, 84A-84B, 84-85, 106A-106B, 106-107, 109, 112, 113, 117, 118, 119, 121, 125, 129, 136A-136B, 136-137, 141, 142-143, 144A-144B, 144-145, 146, 147, 157, 176A-176B, 176-179, 182, 183, 187, 188, 189, 191, 192, 195, 196, 199, 558, 660-661, 694J, 728A-728B, 728-729, 732, 733, 737, 739, 741, 744, 747

**Grade 6:** 51, 154-155, 156A-156B, 156-157, 158, 159, 163, 189, 191, 193, 195, 199 210-211, 212A-212B, 212-213, 214, 215, 232, 233, 234, 237, 239, 240, 243, 251, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 454, 455, 457, 459, 461, 465, 469, 490A-490B, 490, 491, 513, 535, 539, 698I, 698J, 716A-716B, 716-717, 718A-718B, 718-721, 726, 727, 728, 729, 730, 732, 733, 735, 737, 738, 741

- **Develop and use a variety of strategies and approaches.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

- **Identify missing or extraneous information.**

**Grade 5:** 406A-406B, 406-407, 408, 409, 415, 447, 451, 455

**Grade 6:** 582A-582B, 582-583, 584, 585, 589, 605, 607, 613, 617

- **Recognize the need to modify or abandon an unproductive approach.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

## 2.2 Formulate questions and define the problem

- **Identify questions to be answered in new situations.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 724A-724B, 724-725

- **Define problems in new situations.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 724A-724B, 724-725

- **Identify the known and unknown in new situations.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

## 2.3 Construct solutions

- **Organize relevant information from multiple sources.**

**Grade 5:** 32A-32B, 32-33, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 106A-106B, 106-107, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 258J, 260A-260B, 261, 262A-262B, 263, 264, 266A-266B, 267, 268, 270A-270B, 271, 272, 273, 276A-276B, 276-279, 286A-286B, 286-287, 292A-292B, 292-293, 306A-306B, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B,

434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676A-676B, 676-677, 694J, 706A-706B, 706-709, 720A-720B, 720-771, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B, 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 628A-628B, 628, 631, 632A-632B, 632, 633, 634, 635, 636A-636B, 636, 637, 638A-638B, 638, 639, 640, 641, 642A-642B, 642-643, 644, 645, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

- **Select and use appropriate mathematical tools.**

**Grade 5:** 28B, 32, 40B, 64J, 70B, 81, 86B, 88B, 91, 106B, 162B, 164B, 167, 168B, 172B, 180B, 200J, 202B, 214B, 221, 222B, 230B, 234B, 262B, 273, 276B, 305, 326I, 326J, 332A-332B, 332-333, 336, 342B, 349, 352B, 367, 397, 412B, 414B, 426B, 464B, 487, 496B, 499, 528A, 528B, 532A, 532B, 532, 533, 534A, 534B, 534, 535, 536A, 540B, 552B, 559, 562B, 563, 567, 568A, 568B, 570A, 570B, 570, 580, 584, 588, 597, 601, 607, 610B, 614A, 616A, 616, 620A, 622A, 622B, 626A, 641J, 644I, 651, 661, 702B, 709, 728B, 730B

**Grade 6:** 2J, 11, 12B, 24B, 40B, 43, 86B, 102, 103, 109, 140J, 163, 167, 172B, 204B, 209, 224B, 252B, 255, 266B, 316B, 322B, 333, 334B, 357, 358B, 425, 426B, 448B, 476A-476B, 476-479, 492, 493, 494B, 499, 519, 532, 536, 540I, 540J, 542A, 542B, 546A, 550A, 550B, 550, 551, 552A, 562, 563, 564B, 570, 572B, 576A, 576, 580A, 580B, 580, 590B, 598A, 598B, 593, 597, 610, 614, 618J, 627, 638B, 641, 643, 657, 661, 667, 696I, 722A, 722B

- **Apply viable strategies and appropriate concepts and procedures to construct a solution.**

**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-

505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

### **3. The student uses mathematical reasoning.**

*To meet this standard, the student will:*

#### **3.1 Analyze information.**

- **Compare, contrast, and interpret information from a variety of sources.**

**Grade 5:** 32A-32B, 32-33, 44A-44B, 44-45, 80A-80B, 80-81, 110A-110B, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 258I, 258J, 260A-260B, 260-261, 262A-262B, 262-263, 266A-266B, 266-269, 270A-270B, 270-275, 276A-276B, 276-279, 292A-292B, 292-293, 306A-306B, 306-307, 352A-352B, 352-353, 356A-356B, 356-357, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 433-435, 438A-438B, 438-439, 484A-484B, 484-485, 504A-504B, 504-505, 506A-506B, 506-507, 526I, 532A-532B, 532, 533, 534A-534B, 535, 542A-542B, 542, 558A-558B, 558-559, 572A-572B 572-573, 606A-606B, 606-607, 616A-616B, 616, 622A-622B, 622, 624A-624B, 624-625, 626A-626B, 626-627, 644I, 660A-660B, 660-661, 662A-662B, 662, 664A-664B, 664-665, 676A-676B, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 628A-628B, 628-

631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-645, 646-647, 648A-648B, 648-649, 650A-650B, 650-651, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

- **Validate thinking and mathematical ideas using models, known facts, patterns, relationships, and counter-examples.**

**Grade 5:** 2I, 2J, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 64J, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 258J, 260A-260B, 260-261, 276A-276B, 276-279, 292A-292B, 292-293, 296A-296B, 296-297, 306A-306B, 306-307, 326I, 352A-352B, 352-355, 356A-356B, 356-357, 372A-372B, 372-373, 392I, 392J, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 458I, 458J, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 524J, 558A-558B, 558-559, 570A-570B, 570-571, 572A-572B, 572-573, 592I, 592J, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 644I, 644J, 660A-660B, 660-661, 664A-664B, 664-665, 676A-676B, 676-677, 694J, 706A-706B, 706-709, 720A-720B, 720-721, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 74J, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 140I, 140J, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 202I, 202J, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 246I, 246J, 264A-264B, 264-265, 280A-280B, 280-281, 298I, 312A-312B, 312-313, 334A-334B 334-335, 352I, 352J, 374A-374B, 374-377, 388A-388B, 388-389, 406I, 406J, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 470I, 470J, 490A-490B, 490-491, 520A-520B, 520-521, 540I, 540J, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 618J, 620A-620B, 620-623, 648A-648B, 648-649, 664A-664B, 664-667, 676A-676B, 676-677, 696I, 696J, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

### 3.2 Predict Results.

- **Make conjectures based on analysis of new problem situations.**

**Grade 5:** 142-143, 144A-144B, 144-145, 146, 147, 187, 189, 192, 196, 208-209, 210-211, 212, 213, 250, 254, 258J, 296A-296B, 296-299, 306A-306B, 306, 308, 309, 311, 314, 321, 325, 652A-652B, 652-653, 655, 656, 657, 660A-660B, 660-661, 666, 667, 680, 681, 684, 685, 687, 688, 691, 692, 693

**Grade 6:** 51, 154-155, 156A-156B, 156-157, 158, 159, 163, 189, 191, 193, 195, 199, 210-211, 212A-212B, 212-213, 214, 215, 232, 233, 234, 237, 239, 240, 243, 251, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 454, 455, 457, 459,



461, 465, 469, 490A-490B, 490, 491, 513, 535, 539, 618I, 664A-664B, 664-667, 671, 678, 679, 691, 695, 696I, 696I, 716A-716B, 716-717, 718A-718B, 718-721 726, 727, 728, 729, 730, 732, 733, 735, 737, 738, 741

### 3.3 Draw conclusions and verify results.

- **Test conjectures and explain why they are true or false.**

**Grade 5:** 142-143, 144A-144B, 144-145, 146, 147, 187, 189, 192, 196, 208-209, 210-211, 212, 213, 250, 254, 258J, 296A-296B, 296-299, 306A-306B, 306, 308, 309, 311, 314, 321, 325, 652A-652B, 652-653, 655, 656, 657, 660A-660B, 660-661, 666, 667, 680, 681, 684, 685, 687, 688, 691, 692, 693

**Grade 6:** 51, 154-155, 156A-156B, 156-157, 158, 159, 163, 189, 191, 193, 195, 199, 210-211, 212A-212B, 212-213, 214, 215, 232, 233, 234, 237, 239, 240, 243, 251, 444A-444B, 444-447, 448A-448B, 448-449, 452, 453, 454, 455, 457, 459, 461, 465, 469, 490A-490B, 490, 491, 513, 535, 539, 664A-664B, 664-667, 671, 678, 679, 691, 695, 696I, 696J, 716A-716B, 716-717, 718A-718B, 718-721, 726, 727, 728, 729, 730, 732, 733, 735, 737, 738, 741

- **Support arguments and justify results using evidence.**

**Grade 5:** 18A-18B, 18-19, 42A-42B, 42-43, 80A-80B, 80-81, 144A-144B, 144-145, 168A-169B, 168-169, 210A-210B, 210-211, 258J, 276A-276B, 276-279, 352A-352B, 352-355, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 558A-558B, 558-559, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B

**Grade 6:** 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 312A-312B, 312-313, 374A-374B, 374-377, 434A-434B, 434-437, 490A-490B, 490-491, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 706A-706B, 706-707

- **Check for reasonableness of results.**

**Grade 5:** 18A-18B, 18-19, 64I, 144A-144B, 144-145, 210A-210B, 210-211, 276A-276B, 276-279, 406A-406B, 406-407, 434A-434B, 434-437, 484A-484B, 484-487, 558A-558B, 558-559, 606A-606B, 606-607, 624A-624B, 624-625, 660A-660B

**Grade 6:** 52A-52B, 52-53, 98A-98B, 98-99, 116A-116B, 116-119, 156A-156B, 156-157, 212A-212B, 212-213, 226A-226B, 226-227, 264A-264B, 264-265, 490A-490B, 490-491, 560A-560B, 560-561, 582A-582B, 582-583, 648A-648B, 648-649, 706A-706B, 706-707

- **Reflect on and evaluate procedures and results in new problem situations.**  
**Grade 5:** 18A-18B, 18-19, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 258I, 258J, 276A-276B, 276-279, 306A-306B, 306-307, 352A-352B, 352-355, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 644I, 660A-660B, 660-661, 676A-676B, 676-677, 694J, 706A-706B, 706-709, 730A-730B, 730-731  
**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 280A-280B, 280-281, 312A-312B, 312-313, 334A-334B 334-335, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

**4. The student communicates knowledge and understanding in both everyday and mathematical language.**

*To meet this standard, the student will:*

**4.1 Gather information**

- **Develop and follow a plan for collecting information.**  
**Grade 5:** 260A-260B, 260-261, 269, 291, 296A, 296B, 297, 300A-300B, 301, 302A, 302B, 305, 318, 322, 528A, 528B, 532A, 532B, 532, 542A, 542B, 542, 614A, 616A, 616, 620A, 622A, 622B, 622, 662  
**Grade 6:** 140I, 298I, 330, 540I, 540J, 542A, 542B, 550A, 550B, 552A, 564, 568, 570B, 570, 576A, 576, 590B, 598A, 618I, 620A, 620B, 624A, 628A, 628B, 628, 632A, 654A, 661, 662B, 664A, 664B, 665, 668A, 672B, 696I, 696J
- **Use reading, listening, and observation to access and extract mathematical information from multiple sources *such as pictures, diagrams, physical models, oral narratives, and symbolic representations.***  
**Grade 5:** 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227,

238A-238B, 238-239, 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-269, 270A-2790B, 270-273, 274-275, 276A-276B, 276-279, 286A-286B, 286-287, 292A-292B, 292-293, 306A-306B, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 526I, 558A-558B, 558-559, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 644I, 660A-660B, 660-661, 664A-664B, 664-665, 676A-676B, 676-677, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 140I, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 202I, 202J, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 246I, 246J, 264A-264B, 264-265, 280A-280B, 280-281, 298I, 312A-312B, 312-313, 334A-334B 334-335, 352I, 352J, 374A-374B, 374-377, 388A-388B, 388-389, 406J, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 470I, 470J, 490A-490B, 490-491, 520A-520B, 520-521, 560A-560B, 560-561, 582A-582B, 540I, 540J, 582-583, 598A-598B, 598-599, 618J, 620A-620B, 620-623, 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 648A-648B, 648-649, 650A-650B, 650-651, 676A-676B, 676-677, 696I, 696J, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

- **Choose appropriate available technology to browse, select, and retrieve relevant mathematical information from a variety of sources.**

**Grade 5:** 11, 28B, 31, 32B, 32, 40B, 64I, 70B, 81, 88B, 91, 97, 106B, 155, 162B, 164B, 167, 168B, 172B, 180B, 200J, 202B, 211, 214B, 221, 222B, 230B, 234B, 262B, 273, 276B, 285, 305, 326I, 342B, 345, 352B, 367, 397, 412B, 414B, 426B, 429, 464B, 487, 496B, 499, 545, 552B, 559, 562B, 563, 567, 597, 601, 607, 610B, 651, 661, 675, 702B, 709, 727, 728B, 730B

**Grade 6:** 2J, 11, 24B, 35, 40B, 43, 86B, 102, 103, 109, 140J, 163, 167, 172B, 204B, 209, 223, 224B, 252B, 255, 266B, 269, 309, 316B, 322B, 333, 334B, 357, 358B, 383, 421, 425, 426B, 448B, 479, 494B, 499, 519, 540J, 557, 564B, 580, 593, 597, 618I, 627, 638B, 641, 645, 657, 661, 667, 721, 722B

## 4.2 Organize and interpret information

- **Organize and clarify mathematical information by reflecting, verbalizing, discussing, or writing.**

**Grade 5:** 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227,

238A-238B, 238-239, 258I, 258J, 276A-276B, 276-279, 292A-292B, 292-293, 306A-306B, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372A-372B, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572A-572B, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 644I, 664A-664B, 664-665, 676A-676B, 676-677, 694J, 706A-706B, 706-709, 720A-720B, 720-721, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 264A-264B, 264-265, 278A-278B, 278-279, 280A-280B, 280-281, 298I, 312A-312B, 312-313, 324A-324B, 324-325, 334A-334B, 334-335, 362A-362B, 362-364, 374A-374B, 374-377, 388A-388B, 388-389, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 470I, 490A-490B, 490-491, 512A-512B, 512-513, 520A-520B, 520-521, 540I, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 686I, 696J, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

### 4.3 Represent and share information

- **Clearly and effectively express or present ideas and situations using both everyday and mathematical language *such as models, tables, charts, graphs, written reflection, or algebraic notation.***

**Grade 5:** 2I, 2J, 32A-32B, 32-33, 42A-42B, 42-43, 44A-44B, 44-45, 64J, 80A-80B, 80-81, 100A-100B, 100-103, 104A-104B, 104-105, 106A-106B, 106-107, 110A-110B, 110-111, 144A-144B, 144-145, 168A-169B, 168-169, 176A-176B, 176-179, 180A-180B, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238A-238B, 238-239, 258I, 258J, 260A-260B, 260-261, 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-273, 274-275, 276A-276B, 276-279, 286A-286B, 286-287, 292A-292B, 292-293, 306A-306B, 306-307, 326I, 326J, 352A-352B, 352-355, 356A-356B, 356-357, 372A-372B, 372-373, 392I, 392J, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438-439, 458I, 458J, 484A-484B, 484-487, 504A-504B, 504-505, 506A-506B, 506-507, 526I, 526J, 558A-558B, 558-559, 572A-572B, 572-573, 592I, 592J, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 626-627, 660A-660B, 660-661, 644I, 644J, 664A-664B, 664-665, 676A-676B, 676-677, 694J, 706A-706B, 706-709, 730A-730B, 730-731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 74J, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 140I, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 202I, 202J, 212A-

212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 246I, 246J, 264A-264B, 264-265, 278A-278B, 278-279, 280A-280B, 280-281, 298I, 312A-312B, 312-313, 324A-324B, 324-325, 334A-334B 334-335, 362A-362B, 362-364, 352I, 352J, 374A-374B, 374-377, 388A-388B, 388-389, 406J, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 470I, 470J, 490A-490B, 490-491, 512A-512B, 512-513, 520A-520B, 520-521, 540I, 540J, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 618J, 620A-620B, 620-623, 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 648A-648B, 648-649, 654A-654B, 654-657, 674A-674B, 674-675, 676A-676B, 676-677, 696I, 696J, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

- **Explain or represent mathematical ideas and information in ways appropriate for audience and purpose.**

**Grade 5:** 2I, 2J, 32A-32B, 32-33, 64J, 80A-80B, 80-81, 104A-104B, 104-105, 168A-169B, 168-169, 226A-226B, 226-227, 276A-276B, 276-279, 258I, 258J, 292A-292B, 292-293, 306A-306B, 306, 326I, 326J, 352A-352B, 352-355, 356A-356B, 356-357, 392I, 392J, 406A-406B, 406-407, 434A-434B, 434-437, 438A-438B, 438, 439, 458I, 458J, 484A-484B, 484-487, 504A-504B, 504-505, 526I, 526J, 558A-558B, 558-559, 570A-579B, 570-571, 592I, 592J, 606A-606B, 606-607, 624A-624B, 624-625, 626A-626B, 627, 64I, 644J, 660A-660B, 660-661, 664A-664B, 664-665, 694J, 706A-706B, 706-709, 720A-720B, 720-721, 730A-730B, 731

**Grade 6:** 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54A-54B, 54-55, 74J, 98A-98B, 98-99, 116A-116B, 116-119, 120A-120B, 120-121, 140I, 140J, 156A-156B, 156-157, 180A-180B, 180-181, 182A-182B, 182-183, 202I, 202J, 212A-212B, 212-213, 226A-226B, 226-227, 228A-228B, 228-229, 246I, 246J, 264A-264B, 264-265, 278A-278B, 278-279, 280A-280B, 280-281, 298I, 312A-312B, 312-313, 324A-324B, 324-325, 334A-334B 334-335, 352I, 352J, 374A-374B, 374-377, 388A-388B, 388-389, 406I, 406J, 414A-414B, 414-415, 434A-434B, 434-437, 450A-450B, 450-451, 470I, 470J, 490A-490B, 490-491, 512A-512B, 512-513, 520A-520B, 520-521, 540I, 540J, 560A-560B, 560-561, 582A-582B, 582-583, 598A-598B, 598-599, 618I, 618J, 620A-620B, 620-623, 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 648A-648B, 648-649, 654A-654B, 654-657, 674A-674B, 674-675, 676A-676B, 676-677, 696I, 696J, 706A-706B, 706-707, 710A-710B, 710-711, 724A-724B, 724-725

**5. The student understands how mathematical ideas connect within mathematics, other subject areas, and real-life situations.**

*To meet this standard, the student will:*

**5.1 Relate concepts and procedures within mathematics.**

- **Relate and use conceptual and procedural understandings among a variety of mathematical content areas.**

**Grade 5:** 70A-70B, 70-71, 100A-100B, 100-103, 104A-104B, 104-105, 106A-106B, 106-107, 108A-108B, 108-109, 172A-172B, 172-173, 174A-174B, 174-175, 176A-176B, 176-179, 282A-282B, 282-285, 286A-286B, 286-287, 302A-302B, 302-305, 332A-332B, 332-335, 540A-540B, 540-541, 542A-542B, 542-545, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557, 564A-564B, 564-567, 568A-568B, 568-569, 602A-602B, 602-605, 610A-610B, 610-613, 652A-652B, 652-653, 696A-696B, 696-699, 700A-700B, 700-701, 706A-706B, 706-709, 712A-712B, 712-715, 716A-716B, 716-717, 718A-718B, 718-719, 724A-724B, 724-727, 728A-728B, 728-729

**Grade 6:** 8A-8B, 8-11, 40A-40B, 40-43, 44A-44B, 44-47, 48A-48B, 48-51, 112A-112B, 112-115, 116A-116B, 116-119, 274A-274B, 274-275, 276A-276B, 276-277, 328A-328B, 328-329, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-387, 408A-408B, 408-409, 410A-410B, 410-411, 412A-412B, 412-413, 418A-418B, 418-421, 422A-422B, 422-425, 426A-426B, 426-427, 428A-428B, 428-429, 430A-430B, 430-433, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449, 470J, 476A-476B, 476-479, 540I, 540J, 564A-564B, 564-567, 568A-568B, 568-569, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 590A-590B, 590-593, 594A-594B, 594-597, 624A-624B, 624-627, 642A-642B, 642-647, 662-663, 692A-698B, 696I, 696J, 698-699, 700A-700B, 700-705, 710A-710B, 710-711, 712A-712B, 712-715, 716A-716B, 716-717, 718A-718B, 718-721, 722A-722B, 722-723

- **Relate and use different mathematical models and representations of the same situation.**

**Grade 5:** 2I, 2J, 4A-4B, 4-5, 8A-8B, 8-11, 14A-14B, 14-17, 64J, 92A-92B, 92-93, 104A-104B, 104A-104B, 104-105, 106A-106B, 106-107, 164A-164B, 164-165, 174A-174B, 174-175, 176A-176B, 176-179, 302A-302B, 302-305, 352A-352B, 352-355, 392I, 392J, 394A-394B, 394-397, 398A-398B, 398-399, 400A-400B, 400-401, 404A-404B, 404-405, 410A-410B, 410-411, 412A-412B, 412-413, 416A-416B, 416-417, 426A-426B, 426-429, 430A-430B, 430-431, 458I, 458J, 526J, 528A-528B, 528-529, 536A-536B, 536-539, 562A-562B, 562-563, 614A-614B, 614-615, 616A-616B, 616-617, 620A-620B, 620-621, 622A-622B, 622-623, 644J, 648A-648B, 648-651, 652A-652B, 652-653, 668A-668B, 668-669, 724A-724B, 724-727, 728A-728B

**Grade 6:** 4A-4B, 4-7, 8A-8B, 8-11, 40A-40B, 40-43, 76A-76B, 76-77, 110A-110B, 110-111, 116A-116B, 116-119, 140I, 140J, 146A-146B, 146-149, 160A-160B, 160-163, 164A-164B, 164-167, 168A-168B, 168-169, 172A-172B, 172-175, 274A-274B, 274-275, 298I, 302A-302B, 302-305, 306A-306B, 306-311, 312A-312B, 312-313, 330A-330B, 330-333, 352I, 352J, 354A-354B, 354-357, 358A-358B, 358-361, 374A-374B, 374-377, 408A-408B, 408-409, 412A-412B, 412-413, 440A-440B, 440-443, 444A-444B, 444-445, 448A-448B, 448-449, 470I, 490A-490B, 490-491, 552A-552B, 552-553, 540I, 540J, 618J, 628A-628B, 628-631, 696I, 696J, 698A-698B, 698-699, 710A-710B, 710-711, 716A-716B, 716-717, 718A-718B, 718-721

## 5.2 Relate mathematical concepts and procedures to other disciplines.

- **Identify mathematical patterns and ideas in other disciplines.**

**Grade 5:** 8B, 14B, 16, 24, 26B, 30, 68B, 76B, 86B, 96, 102, 104B, 108B, 135, 140, 144B, 148B, 151, 154, 158B, 166, 174B, 204B, 216, 232B, 236, 238B, 265, 278, 292B, 299, 304, 306B, 328B, 330, 336B, 344, 346B, 348, 355, 362, 364B, 366, 368B, 372B, 394B, 398B, 406B, 410B, 417, 418B, 428, 438B, 474B, 478B, 484B, 490B, 502B, 506B, 528B, 532B, 536B, 538, 542B, 566, 564B, 568B, 572B, 594B, 614B, 616B, 620B, 626B, 646B, 648B, 652B, 654B, 662B, 676B, 696B, 700B, 708, 724B, 726

**Grade 6:** 4B, 6, 10, 14B, 18B, 20B, 32B, 34, 42, 46, 48B, 50, 54B, 76B, 80B, 82B, 88, 92, 94B, 102, 108, 110B, 118, 120B, 144, 148, 162, 164B, 167, 168B, 170B, 172B, 176B, 182B, 204B, 206B, 208, 212B, 220B, 222, 248B, 250, 266B, 270B, 276B, 300B, 302B, 304, 308, 318B, 320, 330B, 332, 354B, 356, 360, 362B, 368B, 370B, 380B, 382, 388B, 408B, 412B, 422B, 424, 428B, 430B, 442, 444B, 450B, 472B, 474, 478, 482, 484B, 486, 498, 506B, 508, 514B, 516B, 516, 520B, 542B, 549, 550B, 554B, 560B, 567, 568B, 574, 578, 580, 589, 596, 620B, 622, 624B, 626, 630, 636B, 640, 644, 654B, 667, 674B, 676B, 702, 706B, 718B, 720, 723, 724B

- **Use mathematical thinking and modeling in other disciplines.**

**Grade 5:** 8B, 14B, 16, 24, 26B, 30, 68B, 76B, 86B, 96, 102, 104B, 108B, 135, 140, 144B, 148B, 151, 154, 158B, 166, 174B, 204B, 216, 232B, 236, 238B, 265, 278, 292B, 299, 304, 306B, 328B, 330, 336B, 344, 346B, 348, 355, 362, 364B, 366, 368B, 372B, 394B, 398B, 406B, 410B, 417, 418B, 428, 438B, 474B, 478B, 484B, 490B, 502B, 506B, 528B, 532B, 536B, 538, 542B, 566, 564B, 568B, 572B, 594B, 614B, 616B, 620B, 626B, 646B, 648B, 652B, 654B, 662B, 676B, 696B, 700B, 708, 724B, 726

**Grade 6:** 4B, 6, 10, 14B, 18B, 20B, 32B, 34, 42, 46, 48B, 50, 54B, 76B, 80B, 82B, 88, 92, 94B, 102, 108, 110B, 118, 120B, 144, 148, 162, 164B, 167, 168B, 170B, 172B, 176B, 182B, 204B, 206B, 208, 212B, 220B, 222, 248B, 250, 266B,

270B, 276B, 300B, 302B, 304, 308, 318B, 320, 330B, 332, 354B, 356, 360, 362B, 368B, 370B, 380B, 382, 388B, 408B, 412B, 422B, 424, 428B, 430B, 442, 444B, 450B, 472B, 474, 478, 482, 484B, 486, 498, 506B, 508, 514B, 516B, 516, 520B, 542B, 549, 550B, 554B, 560B, 567, 568B, 574, 578, 580, 589, 596, 620B, 622, 624B, 626, 630, 636B, 640, 644, 654B, 667, 674B, 676B, 702, 706B, 718B, 720, 723, 724B

- Describe examples of contributions to the development of mathematics *such as the contributions of women, men, and different cultures.*

**Grade 5:** 86B, 103, 528B, 543, 544, 614B, 616B,

**Grade 6:** 7, 97, 149, 305, 320, 499, 518, 576, 583, 589

### 5.3 Relate mathematical concepts and procedures to real-life situations.

- Recognize the widespread use of mathematics in daily life and the extensive use of mathematics outside the classroom, *for example, in banking or sports statistic.*

**Grade 5:** 8B, 24, 31, 97, 102, 151, 155, 160B, 221, 272, 284, 285, 304, 306B, 336B, 345, 348, 355, 362, 368B, 372B, 410B, 422, 429, 436, 502B, 532B, 545, 572B, 594B, 612, 646B, 650, 654B, 674, 675, 676B, 699, 716B, 727

**Grade 6:** 20B, 46, 50, 94B, 96, 118, 176B, 206B, 248B, 250, 254, 268, 300B, 330B, 376, 388B, 444B, 472B, 484B, 486, 508, 518, 520B, 544, 550B, 556, 567, 580B, 589, 592, 644, 651, 724B

- Investigate the use of mathematics within several occupations/careers of interest.

**Grade 5:** 531, 572-573

**Grade 6:** 54-55, 228-229, 520-521, 598-599