

A Correlation of

SCOTT FORESMAN ■ ADDISON WESLEY

Mathematics

to the

**North Dakota
Mathematics Standards and
Benchmarks
Grades K-6**



G/M-217

Introduction

This document demonstrates how **Scott Foresman – Addison Wesley Mathematics** meets the objectives of the North Dakota Mathematics Standards and Benchmarks. Correlation page references are to the Teacher’s Edition, which contains facsimile Student Edition pages.

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

● Reaching All Learners

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

● Test Prep

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

● Priority on problem solving:

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

● Instructional Support

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

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

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**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks
Kindergarten**

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

K. 1.1. Count to 20

101I, 103A-103B, 127A, 127-128, 129

K. 1.2. Count backward from 10 to 1

83A, 91B

K. 1.3. Demonstrate one- to- one correspondence by counting up to 10 objects

27A-27B, 51I, 53A-53B, 57A-57B, 57-58, 63A-63B, 71A-71B, 75I, 77A-77B, 77, 79A-79B, 79, 83A-83B, 83, 87A-87B

K. 1.4. Identify ordinal numbers to order objects, 1st – 5th

69A-69B

K. 1.5. Identify and write numerals to 10

55A-55B, 55-56, 59A-59B, 59-60, 61A-61B, 61-62, 71B, 73, 81A-81B, 81-82, 84, 85A-85B, 85-86, 88

K. 1.6. Determine the relationship between two sets with 10 or fewer objects;

i. e., less than, greater than, or equal to

25I, 27A-27B, 29A-29B, 29-30, 40, 51J, 63A-63B, 67A-67B, 68, 71A-71B, 87A-87B, 88, 89A-89B, 202, 239B, 269A-269B, 296

K. 1.7. Use concrete materials to represent wholes and halves

215A-215B, 216

OPERATIONS AND THEIR PROPERTIES

No [North Dakota] expectations at this level.

COMPUTATIONAL FLUENCY AND ESTIMATION

No [North Dakota] expectations at this level.

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION

TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS

K. 2.1. Identify and reproduce two- dimensional figures; i. e., circle, triangle, rectangle, and square

66, 104, 148, 172, 203A-203B, 205A-205B, 205-206, 208, 219B, 219, 221, 292

K. 2.2. Match a three- dimensional object with its stated name; i. e., cone, sphere, cube, cylinder (e. g., which of these is a cone?)

197A-197B, 198, 221

COORDINATE GEOMETRY

No [North Dakota] expectations at this level

TRANSFORMATION AND SYMMETRY

No [North Dakota] expectations at this level

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

K. 2.3. Identify position and direction; i. e., inside, outside, between, above, below, behind, left, and right

3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9A-9B, 9-10, 21A-21B, 21, 23, 30, 38

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION**

K. 3.1. Sort objects according to a given attribute; e. g., use, size, color, shape
1I, 13A-13B, 15A-15B, 16, 71B, 203B, 203-204

K. 3.2. Use picture graphs as sources of information
31A-31B, 31-32, 47A-47B, 49, 56, 67B, 122, 168, 238, 300

PROBABILITY

No [North Dakota] expectations at this level.

STATISTICAL METHODS

No [North Dakota] expectations at this level.

PREDICTIONS, DATA ANALYSIS AND INFERENCES

No [North Dakota] expectations at this level.

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS**

K. 4.1. Name the days of the week in order
159I, 161A-161B, 161-162

K. 4.2. Tell time to the hour using digital and analog clocks
159J, 173A-173B, 173-174, 175A-175B, 175-176, 178, 194, 290

K. 4.3. Order pictures first, next, last based on time
116, 169B, 169-170, 172, 174, 193

K. 4.4. Compare and order objects according to their length or weight

131I-131J, 135A-135B, 137A-137B, 146, 149A-149B

K. 4.5. Identify a penny, nickel, and dime and state its value

179A, 179-180, 181A, 181, 183A-183B, 183-184, 193, 200

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**K. 4.6. Measure length with non- standard units; e. g., paper clips, cubes**

139A-139B, 139-140, 141A-141B, 141-142, 157

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****K. 5.1. Identify, sort, and classify objects by attributes**

1I-1J, 11A-11B, 13A-13B, 15A-15B, 16, 17A-17B, 71B, 203B, 259A-259B

K. 5.2. Recognize, extend, and describe simple patterns

18, 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, 54, 80, 95A-95B, 95-96, 98, 100, 134, 164, 192, 276, 292

NUMERIC AND ALGEBRAIC REPRESENTATIONS*No [North Dakota] expectations at this level.***MATHEMATICAL MODELING****K. 5.3. Use tools and strategies (e. g., manipulatives) to model problems**

6, 40, 51I-51J, 65A-65B, 70, 91B, 97A-97B, 108, 143A-143B, 143-144, 152, 185A-185B, 185-186, 217A-217B, 217-218, 220, 223I, 225A-225B, 225-226, 227A-227B, 229A-229B, 231A-231B, 233A-233B, 235A-235B, 237A-237B, 239A, 243I-243J, 245A-245B, 245-246, 247A-247B, 249A-249B, 249-250, 251A-251B, 253B, 254, 255A, 257A-257B, 263I-263J, 265A-265B, 265-266, 267A-267B, 267, 271A-271B, 273A-273B, 275A-275B, 277B, 279A-279B, 281A

RATES OF CHANGE*No [North Dakota] expectations at this level.*

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks**

Grade One

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

1.1.1. Count and order numbers to 100

31A-31B, 31-32, 35-36, 42, 82, 239I-239J, 241A-241B, 245A-245B, 245-246, 247A-247B, 247-248, 253, 263A-263B, 263-264, 278, 279J, 294, 295A-295B, 295-296, 299A-299B, 299-300, 301A-301B, 301-302, 305, 319B, 319-320, 328, 342

1.1.2. Identify and write numerals to 100

239J, 243-244, 245A-245B, 245-246, 247A, 247-248, 253, 257-258, 263-264, 277, 281-282, 283-284, 285-286, 293, 295-296, 327, 328B

1.1.3. Count backward from 20

245B, 277

1.1.4. Count by 2's to 20, and 10's to 100

243A-243B, 243-244, 253, 255A-255B, 255-256, 257A-257B, 257-258, 269A-269B, 277-278, 281A-281B, 486

1.1.5. Group objects by 2's, 5's, and 10's

243B, 247A-247B, 257A-257B, 281B, 283B, 319B, 457I

1.1.6. Identify position using ordinal numbers

267A-267B, 267-268, 269, 301A, 328A, 382

**1.1.7. Connect number words and numerals to the quantities they represent
(0 - 10)**

11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 40

1.1.8. Represent and explain fractions (i. e., one half, one fourth) as part of a whole and part of a set using concrete materials/ drawings

183A-183B, 183-184, 185A-185B, 185-186, 187A-187B, 187-188, 189B, 189-190, 194, 195, 202, 232, 431A

1.1.9. Identify place value for ones and tens

279I, 281A-281B, 281-282, 283A-283B, 283-284, 285A-285B, 285-286, 293, 306, 322, 327, 328A-328B, 471A, 477A-477B

1.1.10. Compare two digit numbers using symbols; i. e., >, <, =

297A-297B, 297-298, 301-302, 305, 320, 327, 328A, 342, 408

1.1.11. Use grade- appropriate terms when communicating about addition and subtraction; i. e., sum, difference

47A-47B, 47-48, 63A-63B, 70, 486

OPERATIONS AND THEIR PROPERTIES**1.1.12. Use symbols to write addition and subtraction number sentences; i. e., +, -, =**

49A-49B, 49-50, 51-52, 53B, 54, 57A-57B, 57-58, 65B, 65-66, 67B, 71A, 71-72, 73, 77B, 77-78, 79B, 80, 81, 88, 99A-99B, 103B, 105B, 108, 111A-111B, 125B, 127B, 129B, 133A-133B, 133-134, 137B, 138, 139A-139B, 141A, 143A-143B, 143-144, 146, 147, 154, 193, 317B, 383A, 387A, 415I, 421A, 436, 437B, 438, 444, 445A, 445-446, 447-448, 449, 456

COMPUTATIONAL FLUENCY AND ESTIMATION**1.1.13. Recall addition facts and subtraction facts (0- 10)**

101, 104, 106, 115, 121, 180, 317-318, 328B, 418, 457J

1.1.14. Estimate the number of objects and check by counting

249A-249B, 250, 467B

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION**TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS**

1.2.1. Identify, compare, draw, and sort two- dimensional figures; i. e., circle, triangle, rectangle, square, oval and diamond

7A, 31A, 133A, 155I, 165A-165B, 165-166, 167A-167B, 167-168, 169A-169B, 169-170, 173A, 177A, 179, 193B, 196, 201

1.2.2. Identify three- dimensional objects; i. e., pyramid, cube, cone, cylinder, sphere

157A-157B, 157-158, 163, 180, 193A-193B, 193-194, 201, 229

COORDINATE GEOMETRY

No [North Dakota] expectations at this level.

TRANSFORMATION AND SYMMETRY

1.2.3. Identify lines of symmetry in two- dimensional figures

171A-171B, 171-172, 179, 202, 382, 414B

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

1.2.4. Arrange and describe objects in space by proximity, position, and direction; e. g., near, far, below, above, up, down, behind, in front of, next to, left or right of

315A-315B

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION

DATA COLLECTION, DISPLAY, AND INTERPRETATION

1.3.1. Identify and display various forms of data in their world using charts and graphs; e. g., tally charts and bar graphs

251B, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313, 319A, 406, 481B

1.3.2. Read and interpret tally charts and picture graphs as sources of information

29A, 65A, 97A, 143A, 251B, 309A-309B, 309-310, 313A-313B, 313-314, 319A, 320, 321, 356, 414A

1.3.3. Sort objects by common attribute

307A-307B, 307

PROBABILITY

No [North Dakota] expectations at this level.

STATISTICAL METHODS

No [North Dakota] expectations at this level.

PREDICTIONS, DATA ANALYSIS AND INFERENCES

No [North Dakota] expectations at this level.

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION

MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS

1.4.1. Use the days of the week to show knowledge of yesterday, today, and tomorrow

225A-225B, 225

1.4.2. Tell time to the hour and half- hour using digital and analog clocks

5A, 207A-207B, 207-208, 209A-209B, 209-210, 211A-211B, 211-212, 217, 229A-229B, 229-230, 237, 238A, 306, 322, 400

1.4.3. Estimate, and verify by measuring, length, weight, or capacity using nonstandard units

365A-365B, 365-366, 369A-369B, 369-370, 381, 383A-383B, 389A-389B, 389-390

1.4.4. Estimate, and verify by measuring length to the nearest inch, foot, and centimeter

371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 379A, 381, 400, 413

1.4.5. Identify a penny, nickel, dime, and quarter and state its value

331A-331B, 333A-333B, 343A-343B, 345B, 382

1.4.6. Count a like set of pennies, nickels, or dimes to \$1.00

333-334, 348

1.4.7. Demonstrate that different combinations of coins (i. e., pennies, nickels and dimes) can have the same value

329I-329J, 331A, 334, 336, 337B, 343B, 343-344, 346, 347-348

1.4.8. Sequence events with respect to time; e. g., yesterday, today, tomorrow, seasons

203J, 223A-223B, 224

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**1.4.9. Identify the appropriate tool used to measure length (i.e., ruler), weight (i.e., scale), time (i.e., clock, calendar) and temperature (i.e., thermometer)**

397A-397B, 397-398, 405A-405B, 492A

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****1.5.1. Identify, sort, and classify objects by two or more attributes**

307B

1.5.2. Recognize, extend, create and describe patterns

1I, 3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9-10, 33A-33B, 33-34, 36, 41, 88A, 91A, 93A, 154A, 194, 241A, 243A, 270, 299A, 319A, 419A

NUMERIC AND ALGEBRAIC REPRESENTATIONS

1.5.3. Demonstrate the commutative property of addition; e. g., $3 + 5 = 5 + 3$

93A-93B, 93-94, 116, 154B

MATHEMATICAL MODELING

No [North Dakota] expectations at this level.

RATES OF CHANGE

No [North Dakota] expectations at this level.

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks**

Grade Two

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

2.1.1. Count and order numbers up to 1,000

12, 79I, 81A-81B, 81-82, 83A-83B, 93, 97A-97B, 97-98, 107, 131-132, 144, 163, 224, 318, 389J, 391A-391B, 391-392, 399A, 403, 407A-407B, 407-408, 409A-409B, 409-410, 415B, 423, 433A, 482

2.1.2. Count backward from 100

100, 145B

2.1.3. Count by 2's, 5's, and 10's

22, 81A, 91A, 99A-99B, 99-100, 107, 123A, 132, 152, 327

2.1.4. Identify and write numerals to 1,000

79I, 81B, 81-82, 83B, 83-84, 93, 105A-105B, 105-106, 107, 131, 391-392, 393A-393B, 393-394, 395A-395B, 395-396, 407-408, 415B, 423

2.1.5. Connect number words and numerals to the quantities they represent up to 100

79I, 81B, 81-82, 83A-83B, 85A-85B, 85-86, 93, 126, 131, 164, 391B

2.1.6. Demonstrate, identify, and explain the difference between odd and even numbers using concrete objects or drawings

101A-101B, 101-102, 132, 179A

2.1.7. Identify place value concepts through the hundreds place

81A-81B, 81-82, 83A-83B, 83-84, 93, 131, 137A, 166, 224, 254, 389I, 393A-393B, 393-394, 395A-395B, 395-396, 403-404, 415B, 416, 423, 427B, 433A

2.1.8. Use the appropriate symbols (i.e., >, <, =) to compare whole numbers to 1,000

12, 91A-91B, 91-92, 108, 172B, 238, 399A-399B, 399-400, 403, 416, 424, 424A, 498A

2.1.9. Round numbers to tens and hundreds

95A-95B, 95-96, 107, 131, 172B, 268, 308

2.1.10. Use grade- appropriate terms when communicating about addition and subtraction; i. e., addend, sum, difference

5A-5B, 5, 17A, 43A, 45A, 57B, 72, 78A

2.1.11. Represent and explain fractions (i.e., one half, one third, one fourth, one sixth and one eighth) as part of a whole and part of a set

245J, 271A-271B, 271-272, 273B, 275A-275B, 275-276, 277A, 278, 281, 288, 327A, 372, 382, 404, 424B

OPERATIONS AND THEIR PROPERTIES**2.1.12. Select the appropriate operation to solve problems involving addition and subtraction of whole numbers**

19A-19B, 19-20, 21, 23A, 31A, 40, 49A, 67A, 97A, 113A, 269A, 325A, 377A-377B, 377-378, 487A-487B, 488, 489B

2.1.13. Demonstrate the inverse relationship between addition and subtraction; e. g., $3+ 4= 7$, $7- 4= 3$

63A-63B, 63-64, 65A-65B, 65-66, 71-72, 78, 172A, 227A-227B, 227-228, 235B, 268

2.1.14. Model multiplication using equal sets of objects

467A-467B, 467, 475B, 491, 497

2.1.15. Add and subtract two- digit whole numbers between 0 and 100 without regrouping

133I-133J, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 143, 145A-145B, 145-146, 147A-147B, 147-148, 151-152, 159A-159B, 159-160, 163B, 171, 172A, 184, 213A, 224, 238, 244A, 254, 268, 279A, 279, 282, 315A, 330, 332, 382, 388, 407A, 415A

COMPUTATIONAL FLUENCY AND ESTIMATION**2.1.16. Recall addition facts and subtraction facts (0- 18)**

1I, 12, 22, 25A-25B, 31B, 34, 41I, 44, 45B, 46, 48, 52, 54, 59, 71, 77, 78A, 94, 108, 126, 144, 152, 166, 184, 308

2. 1.17. Estimate whole number sums and differences

133I, 141A-141B, 141-142, 143, 149A-149B, 149-150, 151, 165, 171-172, 191A-191B, 191-192, 229A-229B, 229-230, 236, 237, 244, 244B, 362, 453A-453B

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION**TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS****2.2.1. Recognize geometric shapes and structures in their environment**

57A, 247B, 249B, 280, 379A

2.2.2. Identify, describe, and sort three- dimensional objects; i. e., pyramid, cube, rectangular prism, cone, cylinder, and sphere

247A-247B, 247-248, 249A-249B, 249-250, 253, 287, 313A

2.2.3. Predict and demonstrate the results of putting together and taking apart shapes

255A-255B, 255-256, 267

COORDINATE GEOMETRY

No [North Dakota] expectations at this level.

TRANSFORMATION AND SYMMETRY**2.2.4. Identify symmetrical shapes and draw their line of symmetry**

261A-261B, 261-262, 267, 279B, 287, 332

2.2.5. Identify congruent figures from a selection of similar figures

257A-257B, 257, 267, 287, 308, 362, 424B

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

No [North Dakota] expectations at this level.

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION**

2.3.1. Sort and classify objects according to their attributes and organize data about the objects; e. g., Venn diagrams, graphs, tables

189A-189B, 321A-321B, 379A

2.3.2. Demonstrate that data can be represented in more than one way

69A, 321-322, 327A-327B, 439B, 440, 489A

2.3.3. Formulate and answer simple questions from data represented by graphs

17A, 63A, 89A, 119A, 157A, 319A, 319-320, 321A-321B, 321-322, 327A-327B, 327-328, 331, 338, 375A, 395A, 427A, 442, 492

PROBABILITY

No [North Dakota] expectations at this level.

STATISTICAL METHODS

No [North Dakota] expectations at this level.

PREDICTIONS, DATA ANALYSIS AND INFERENCES

2.3.4. Record results of activities involving chance (e. g., coin flips, dice rolls) and make reasonable predictions based upon data

339J, 373A-373B, 373, 375A-375B, 375

2.3.5. Describe the likelihood of an event; e. g., cloudy, it may rain

373B, 375B

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS****2.4.1. Tell time to the nearest quarter hour and 5 minute interval using digital and analog clocks**

34, 161A, 291A-291B, 291-292, 293A-293B, 293-294, 295A-295B, 295-296, 301A, 306, 307, 318, 329-330, 337, 362, 404, 416, 424B, 458

2.4.2. Distinguish between week days and weekend days

Opportunity to meet this objective can be found on pages 303A-303B, 303

2.4.3. Recall the months of the year in order

303B, 311A

2.4.4. Count mixed coins to \$1.00

22, 109A-109B, 109-110, 111A-111B, 111-112, 113A-113B, 113-114, 121-122, 125, 132, 166, 184, 318, 372, 424A, 442

2.4.5. Estimate and measure weight to the nearest pound or kilogram

Opportunity to meet this objective can be found on pages 365A-365B, 365-366, 367A-367B, 367-368

2.4.6. Estimate and measure capacity to the nearest cup or liter

353A

2.4.7. Estimate and measure length to the nearest inch, half- inch, foot, or centimeter

343A, 343-344, 345B, 345-346, 347A, 347-348, 361, 379, 387, 458

2.4.8. Estimate and verify a quantity; e. g., marbles in a jar

415A

2.4.9. Compare and order given lengths, capacities, weights, or temperatures that are expressed in the same unit of measure

353A-353B, 369, 379B

2.4.10. Identify the approximate size of basic units; e. g., width of finger is about one centimeter, large soda bottle is two liters, a paper clip weighs one gram

343A-343B, 345A, 346, 347A, 367A-367B

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**2.4.11. Select the appropriate units for measuring time, length, weight, and temperature**

289I, 297A-297B, 297-298, 343A, 344, 345A, 345-346, 347A-347B, 359B, 365B, 367B, 367, 371-372, 379B, 387

2.4.12. Use the symbols for the dollar and cent

109-110, 111B, 111-112, 113-114, 115-116, 117A-117B, 117-118, 119-120, 122, 132

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****2.5.1. Extend and create number patterns**

61A, 91A, 99A-99B, 99-100, 107, 132, 157A-157B, 157-158, 165, 172, 229A, 409A, 413A-413B, 413-414, 431A

2.5.2. State the rule that describes a given repeating and growing pattern

157B, 157-158, 165, 172, 229A, 231A, 244A, 413A-413B, 413-414, 431A

NUMERIC AND ALGEBRAIC REPRESENTATIONS**2.5.3. Solve addition and subtraction equations with unknown variables; e.g., $2 + _ = 5$**

25-26, 29A-29B, 29-30, 33, 40, 67A-67B, 67-68, 71-72, 78, 78A-78B, 94, 108, 166, 275A, 338A-338B

MATHEMATICAL MODELING**2.5.4. Use symbols (i.e., +, -, =, <, >) to write simple number sentences**

5A-5B, 9A-9B, 9-10, 17A-17B, 19A-19B, 19-20, 21, 24, 28, 31-32, 39-40, 47B, 57-58, 69-70, 163, 172B, 202, 221A-221B, 221-222, 224, 235, 320, 330, 377-378, 381, 388

2.5.5. Use words, objects, and number sentences to represent addition and subtraction problems

1I-1J, 3A-3B, 5A-5B, 5-6, 9A-9B, 9-10, 11, 13A-13B, 14, 15A, 17A-17B, 17-18, 19A-19B, 19-20, 21, 24, 28, 31B, 31-32, 39-40, 43B, 52, 57A-57B, 57-58, 60, 69-70, 72, 78A, 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A, 143-144, 145A-145B, 145-146, 147A-147B, 147-148, 149A, 151-152, 163, 171, 184, 202, 209J, 221A-221B, 221-222, 224, 235, 268, 377-378, 381, 388, 404

RATES OF CHANGE

No [North Dakota] expectations at this level.

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards And Benchmarks**

Grade Three

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

3.1.1. Count and order numbers up to 10,000

21, 22A-22B, 22-23, 27, 31, 34-35, 44B, 45, 53, 54, 62, 71, 239, 445, 552, 572A, 720

3.1.2. Read and write numerals to 10,000

4A-4B, 6A-6B, 6-7, 10A-10B, 10-11, 16-17, 56-57, 60, 127, 461

3.1.3. Represent numbers up to 10,000 in standard, expanded, and word form

6A-6B, 6-7, 8-9, 10-11, 13, 16-17, 20-21, 44B, 44, 52, 56-57, 60, 104-105, 114, 127, 167, 168A, 304, 461, 503, 542, 668

3.1.4. Identify the odd and even whole numbers from 0 to 10, 000

24, 162A, 333

3.1.5. Identify place values from ten thousands through the hundredths place

2I-2J, 8A-8B, 8-9, 11, 13, 17, 23, 41, 44B, 44, 52-53, 54, 60, 101, 114, 127, 143, 169, 170, 292A, 373, 389, 629, 668

3.1.6. Use the appropriate symbols to compare whole numbers from 0 to 10, 000; i. e., >, <, =

18A-18B, 18-21, 23, 34-35, 44B, 45, 53, 57, 58, 61, 97, 210

3.1.7. Use appropriate terms when communicating about computations; i. e., factor, product, divisor, dividend, quotient

260A-260B, 260, 384A-384B, 384, 388B, 388, 392B, 415, 668

3.1.8. Round numbers to tens, hundreds, and thousands

28A-28B, 28-31, 34-35, 44A, 44-45, 53, 58, 62, 127, 131, 197, 218A, 248, 327, 503, 620

3.1.9. Represent fractions and mixed numbers using words, numerals, and physical models

496I, 502A-502B, 502-503, 504A-504B, 504-505, 512A, 514-515, 516A-516B, 516-517, 518A-518B, 518-519, 522A-522B, 522-525, 530-531, 533, 540A, 542A, 542-543, 550-551, 552, 554-556, 558-559, 564A-564B, 564-565, 567, 580, 602, 606

3.1.10. Model, represent, and explain the concept of multiplication; i. e., repeated addition, rectangular arrays, and skip counting

258I-258J, 260A-260B, 260-261, 262A-262B, 262-265, 266B, 267, 274-275, 276A-276B, 276-279, 280A-280B, 280-281, 288B, 292B, 294A-294B, 295, 302-303, 304, 306-307, 309, 310, 314I-314J, 316A-316B, 316-317, 318A-318B, 318, 320A-320B, 320-323, 324A-324B, 324-327, 329, 340B, 341, 348A-348B, 357, 358, 377, 487, 610I, 626A-626B, 626-628, 647, 658A, 666, 671, 675

3.1.11. Model, represent, and explain the concept of division; i. e., repeated subtraction, rectangular arrays, and equal sharing

368I-368J, 370A-370B, 370-371, 372A-372B, 372-373, 374A-374B, 374-377, 380A, 382-383, 386B, 388B, 390A-390B, 392B, 392-393, 395, 402B, 406A, 409, 414, 418, 422, 610J, 648A-648B, 648-649, 651, 658B, 660, 667, 673

3.1.12. Use a variety of methods and tools for problem solving; e. g., computing, including mental math, paper and pencil, calculator, manipulatives

80A-80B, 80-81, 82A-82B, 82-85, 89, 92-93, 94A-94B, 94-95, 96A-96B, 96-97, 98A, 104A, 106-107, 117-118, 121-122, 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-137, 144-145, 148A-148B, 148, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 166A-166B, 166-167, 169, 304, 396B, 612A-612B, 612-615, 618A-618B, 618-620, 624-625, 640A-640B, 640-641, 646, 649, 652A-652B, 652-655, 666-667, 668, 672, 674, 676

OPERATIONS AND THEIR PROPERTIES**3.1.13. Add and subtract whole numbers between 0 and 10,000**

4A, 5, 6A, 7, 8A, 9, 11, 14A-14B, 14-15, 16-17, 21, 25-27, 54-55, 57, 62, 69, 70A, 73, 78, 80A-80B, 80-81, 82A-82B, 82-85, 89, 93, 94A-94B, 94-95, 96A-96B, 96-97, 98A, 102B, 104A-104B, 104, 106-107, 112-113, 114-115, 117-119, 121-123, 126A-126B, 126-127, 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, 152-155, 156A-156B, 156-157, 158-159, 165, 166A-166B, 166-167, 169, 170A-170B, 170-171, 198A, 199, 207, 215, 217, 231, 238A, 238, 248, 265, 266A, 283, 288A, 290, 295, 304, 311, 329, 332A, 335, 339, 343, 358-359, 371, 377, 386A, 393, 403, 406-407, 416, 431, 449, 453, 456A, 486, 537, 539, 542, 567, 590, 631, 637, 658, 711

3.1.14. Model and use the commutative and associative properties of addition and multiplication

66A-66B, 66-69, 78-79, 86A, 115, 116, 120, 249, 264-265, 275, 293, 310, 321, 337, 342A-342B, 342-343, 348B, 350-351, 356-357, 358, 361-362, 367, 553, 601

3.1.15. Apply the multiplication property of zero and one

286A-286B, 286-287, 309, 319, 341

3.1.16. Multiply two- and three- digit numbers by a single- digit number

610I, 617, 626A-626B, 626-628, 630A-630B, 630-631, 632A-632B, 632-635, 636A-636B, 636-637, 639, 640A-640B, 640-641, 646-647, 649, 658A, 666-667, 670-671, 674-675-676, 683, 701, 707

3.1.17. Divide two- and three- digit numbers by a single- digit number without remainders

610J, 623, 648A-648B, 648-649, 650A-650B, 650-651, 652A-652B, 652-655, 658B, 658, 660-661, 667, 670, 673, 674, 677, 683, 701, 707

3.1.18. Demonstrate the inverse relationship between multiplication and division

384A-384B, 384-385, 386A-386B, 386-387, 388A-388B, 388, 390, 392A, 393, 394-395, 396A-396B, 396, 401, 406B, 415, 419-420, 423

3.1.19. Add and subtract simple fractions with like denominators; e. g., $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

520A-520B, 520-521, 525, 530-531, 532A, 550, 556, 560

COMPUTATIONAL FLUENCY AND ESTIMATION**3.1.20. Recall multiplication and division facts (0- 10)**

287, 289-290, 292A-292B, 292-293, 294B, 294, 296-297, 302-303, 304, 311-313, 316-317, 318-319, 321-323, 325-327, 328A-328B, 328-329, 335, 336-337, 341, 343, 350, 356-357, 364-365, 366, 385, 387, 389, 391, 393, 395, 397, 401, 414-415, 423-424, 431, 443, 473, 501, 511, 570, 575

3.1.21. Estimate whole number products and quotients

610J, 616A-616B, 616-617, 620, 622A-622B, 622-623, 624-625, 629, 666, 674

3.1.22. Use estimation to determine if solutions are reasonable

25, 88, 127, 149, 152, 633-634, 637, 640, 646-647, 676

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION**TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS****3.2.1. Compare physical attributes of two- dimensional shapes; i. e., square, triangle, rectangle, and parallelogram**

402A, 446A-446B, 448, 450A-450B, 450-451, 454A, 455, 459, 463, 474B, 474-475, 478-479, 485, 495, 696A

3.2.2. Describe the characteristics of a cylinder, pyramid, cube, sphere, and cone

54, 276A, 426I, 428A-428B, 432A-432B, 432-433, 439, 440-441, 474B, 485, 488, 492, 498A

3.2.3. Identify points, endpoints, lines, line segments, rays, and angles and use symbols to represent them

442A-442B, 442-443, 444A-444B, 444-445, 449, 462-463, 476-477, 484, 488-489, 493, 639

3.2.4. Identify right angles

444A-444B, 444-445, 453, 489

COORDINATE GEOMETRY**3.2.5. Use ordered pairs to identify the locations of points in a grid; e. g., A- 10 on a map**

218A-218B, 218-221, 223, 225, 246, 252, 256, 348A, 487

TRANSFORMATION AND SYMMETRY**3.2.6. Identify and create shapes that have lines of symmetry**

102A, 460A-460B, 460-461, 462-463, 467, 476B, 484, 490, 494

3.2.7. Identify two- dimensional shapes that are congruent or similar

204A, 358, 456B, 456-459, 461, 484, 490, 494

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

No new [North Dakota] expectations at this level

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION****3.3.1. Identify different parts of a graph; i.e., label, scale, and data**

212A-212B, 212-213, 226A-226B, 228B, 229

3.3.2. Display and interpret graphs with symbols or pictures that represent more than one object or event

55, 95, 140A, 212A-212B, 212, 214-215, 217, 224-225, 226A-226B, 226-227, 237, 240, 246, 251, 255, 284A, 285, 305, 312, 428A, 516A, 553

3.3.3. Solve problems based on data displayed on a graph

55, 95, 115, 140A, 212B, 212-215, 216-217, 221, 222A-222B, 222-223, 224-225, 226B, 227, 228-230, 232A-232B, 232-233, 236-237, 240, 246-247, 249, 251-253, 305, 312, 342A, 344A, 359, 417, 428A, 516A, 553, 584A, 617, 669, 680A

3.3.4. Recognize the elements in the union and intersection of sets represented by Venn diagrams

69

PROBABILITY**3.3.5. Use a simple probability experiment to collect data, display the data in a graph, and interpret the likelihood of the outcome**

678J, 700B, 702A

STATISTICAL METHODS

No [North Dakota] expectations at this level.

PREDICTIONS, DATA ANALYSIS AND INFERENCES**3.3.6. Determine which outcomes are most likely to occur in certain situations; e. g., spinning red is most likely to occur when the spinner is divided among red, blue, green, red**

55, 104A, 136A, 359, 384A, 417, 601, 669, 706

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS****3.4.1. Tell time to the nearest minute using digital and analog clocks**

192A-192B, 192-195, 196A-196B, 196-197, 199, 202-203, 246-247, 250, 254, 416, 445, 600

3.4.2. Determine elapsed time by the hour

198B, 238A-238B, 239, 254, 407, 552

3.4.3. Count coins and bills

36A, 36-38, 41, 46-47, 52-53, 59, 149, 273, 433, 521, 685

3.4.4. Read and measure temperature with a thermometer using Fahrenheit and Celsius scales

696A-696B, 696-697, 698, 718, 724, 728

3.4.5. Estimate and measure to the nearest half inch or centimeter

54, 304, 496J, 532A-532B, 532-533, 534A-534B, 534-535, 537, 544-545, 551, 556-557, 560-561, 562J, 582A-582B, 582-583, 587, 592-593, 604, 608, 615

3.4.6. State specific relationships between units within the same measuring system; e. g., hours in a day, inches in a foot, cups in a pint

54, 114, 536A-536B, 536-537, 538A-538B, 538-539, 542A, 544-545, 551, 552, 557, 561, 565, 584A, 587, 593, 630A, 656A, 675, 680A-680B, 680-683, 684A-684B, 684-685, 690A-690B, 691-692, 694A-694B, 694-695, 697, 698-699, 710A-710B, 710, 718-719, 720, 722-723, 726-728

3.4.7. Estimate and measure perimeter, area, and volume using links, tiles, grid paper, geoboards, and dot paper

262A, 426J, 464A-464B, 464-466, 468A-468B, 468-471, 472A-472B, 472-473, 476A, 478-479, 485, 486, 491, 495

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**3.4.8. Select a variety of tools for measuring length, weight, and capacity**

668

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****3.5.1. Use patterns to solve problems**

24A, 26, 28A, 33, 39, 43, 72A-72B, 72-73, 80A, 103, 128A, 147, 217, 311, 332A-332B, 332-335, 344A-344B, 344-345, 365, 564A, 592, 721

3.5.2. Create patterns using multiplication

24B, 25-26, 34, 55, 58, 270B, 271-273, 274-275, 279, 303, 305, 307, 311, 317, 333-334, 336, 344A-344B, 344-345, 351, 588A

3.5.3. Determine the missing elements of a pattern of multiples

24B, 25-26, 34, 55, 58, 270B, 271-273, 274-275, 279, 303, 305, 307, 311, 317, 333-334, 336, 344A-344B, 344-345, 351

NUMERIC AND ALGEBRAIC REPRESENTATIONS**3.5.4. Solve addition, subtraction, multiplication, and division equations with unknown numbers; e.g., $8x = 56$**

18A, 27, 55, 71, 73, 79, 97, 112, 120, 123, 155, 293, 305, 313, 359, 417, 629, 636A

MATHEMATICAL MODELING**3.5.5. Use symbols to write number sentences; i.e., +, -, >, <, =, x, and ÷**

76A-76B, 76-77, 81, 82A, 104B, 115, 117, 121, 168A-168B, 168-169, 195, 226A, 228A, 267, 291, 296-297, 303, 338, 346A, 472A, 474A, 616A, 669, 684A

RATES OF CHANGE

No new [North Dakota] expectations at this level

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks**

Grade Four

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

4.1.1. Identify place value from hundred thousands through the hundredths place

2I, 4A-4B, 4-7, 8A-8B, 8-9, 10A-10B, 10-11, 14-15, 18-19, 21, 23, 26-27, 28A-28B, 28-29, 33, 40A-40B, 41, 43, 48, 50, 52-53, 56, 79, 81, 143, 147, 178, 257, 628A-628B, 628-629, 630A, 631, 660

4.1.2. Order and compare using symbols; i. e., >, <, =, whole numbers (0 to 100,000) and decimals to hundredths

16B, 16-18, 21, 26, 49, 53, 57, 149, 630B, 630-631, 633, 634-635, 678, 682

4.1.3. Read and write numerals to 100,000

4B, 4-6, 8B, 9, 14-15, 40, 49, 56

4.1.4. Round whole numbers to the nearest tens, hundreds, thousands, ten thousands, and hundred thousands

7, 20A-20B, 20-21, 23, 26-27, 29, 48-49, 50, 53, 57, 67, 97, 192A, 207, 302, 316B, 383, 535, 631

4.1.5. Represent numbers up to hundred thousands in standard and expanded forms

4B, 4-6, 9, 14-15, 49, 56, 354

4.1.6. Write tenths and hundredths as decimals and fractions

33, 34A-34B, 34-36, 43, 48-49, 54-55, 58-59, 215, 502B, 503, 504-505, 519, 556, 567, 612, 624A-624B, 624-627, 629, 634-635, 682

4.1.7. Compare equivalent decimals and fractions, e. g., $\frac{5}{10} = .5$

624A-624B, 624-627, 629, 634-635, 638A, 674, 676, 678, 682

4.1.8. Use appropriate terms when communicating about computations; i. e., numerator and denominator

565-566, 572, 574A, 574-575

4.1.9. Explain the meaning of remainders in real- world situations

384A-384B, 384-385, 400, 421

4.1.10. Determine what information is relevant for solving a problem

4A, 82A, 540B, 590A, 666B, 696A-696B, 696-697, 698-699, 703

4.1.11. Use a variety of strategies to solve problems; e.g., guess and check, work backwards, draw pictures, use objects

16A, 24A-24B, 24-25, 26, 40A, 54, 58, 62A, 64A, 76A, 80A, 90A-90B, 90-91, 94A, 140A-140B, 140-143, 144, 146A, 148A, 156A, 160A, 190A, 204A, 258A, 274A, 278A-278B, 278-280, 284, 290A, 292A, 301, 310, 326A-326B, 326-329, 330, 332A, 357, 361, 396A-396B, 396-399, 412A, 444A, 448A, 474A-474B, 474-475, 487, 493, 512A-512B, 512-513, 516A, 530A, 562A, 584A-584B, 584-585, 586-587, 588A, 619, 648A-648B, 648-649, 650, 652A, 662A, 680, 684, 692A, 696A

OPERATIONS AND THEIR PROPERTIES**4.1.12. Add and subtract whole numbers between 0 and 100, 000**

4A, 7, 8A, 9, 20A, 24A, 27, 32A, 38A, 62A-62B, 62-63, 64A-64B, 64-67, 72A, 74-75, 76A-76B, 76-78, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-87, 90A, 92-93, 102A-102B, 102-103, 110-111, 112, 114-116, 118-120, 150A, 151, 153, 168, 234-235, 263, 264A, 273, 289, 292, 302, 311, 340A, 341, 345, 404A, 408A, 412, 422, 464A, 488, 567, 577, 633

4.1.13. Multiply multi- digit numbers by two- digit numbers

312I-312J, 314A-314B, 314-315, 320A-320B, 320-323, 329, 330-331, 332A-332B, 332-335, 336A-336B, 336-337, 338A-338B, 338-339, 341, 344A-344B, 344-345, 346-347, 352-353, 356-358, 360-363, 367, 377, 383, 399, 503, 527, 540, 550, 567, 612, 655

4.1.14. Divide multi- digit numbers by a single- digit number

146A-146B, 146-147, 153, 158-159, 163, 177, 178, 181, 185-186, 233, 244, 364I-364J, 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, 393, 399, 400-401, 402A, 406A-406B, 406-407, 408A-408B, 408-411, 412A-412B, 412-413, 414-415, 420-421, 422, 424-427, 428-431, 437, 452A, 488-489, 501, 507, 533, 536A, 537, 612, 653, 676-677

4.1.15. Add and subtract fractions and mixed numbers with like denominators
564A-564B, 564-567, 571, 572-573, 574A-574B, 574-577, 581, 586-587, 602A, 602, 610, 614-615, 618-619

4.1.16. Add and subtract decimals
76-78, 81, 92-93, 101, 110-111, 151, 178, 200A, 206A, 244, 261, 270A, 302, 329, 437, 509, 577, 638A-638B, 638-640, 642A-642B, 642-645, 650-651, 653, 674-675, 679-680, 683-684

4.1.17. Use the distributive property to simplify and perform computations
132A-132B, 132-135, 145, 176, 180, 244, 262A-262B, 262-263, 264A-264B, 264-267, 268-269, 292B, 304-305, 353

COMPUTATIONAL FLUENCY AND ESTIMATION

4.1.18. Determine when a rounded solution is appropriate
75, 196A, 600A-600B, 600-601, 604-605, 617, 621, 627

4.1.19. Estimate computations of whole numbers, fractions, and decimals
22A-22B, 22-23, 29, 31, 60I, 68A-68B, 68-71, 72A-72B, 72-73, 74-75, 79, 81, 85, 111, 114-115, 118-119, 143, 163, 244, 254I, 258A-258B, 258-261, 263, 268-269, 273, 285, 315, 316A-316B, 316-319, 323, 331, 353, 354, 360, 368A-368B, 368-370, 373, 378-379, 383, 389, 391, 393, 408A-408B, 408-410, 414-415, 420-421, 422, 424, 428, 431, 478, 488, 560I, 562A-562B, 562-563, 567, 577, 603, 610, 612, 618, 636A-636B, 636-637, 640, 650-651, 674, 679, 683

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION

TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS

4.2.1. Analyze the attributes of two- and three- dimensional shapes (i.e., circle, squares, trapezoid, rhombus) and use vocabulary to describe the attributes
178, 261, 302, 338A, 422, 432I, 434A-434B, 434-437, 438A-438B, 438-439, 444A-444B, 444-447, 448A-448B, 448-449, 450-451, 455, 459, 460A-460B, 460-461, 463, 467, 486-487, 490-492, 494-496, 550, 676

4.2.2. Identify, describe, and model (e. g., using straws or other materials) parallel, perpendicular, and intersecting lines and line segments

440A-440B, 440-443, 447, 450-451, 488, 490, 494, 496

COORDINATE GEOMETRY*No new [North Dakota] expectations at this level (See grade 3)***TRANSFORMATION AND SYMMETRY****4.2.3. Recognize the changes in position and orientation of two-dimensional figures after transformations; i.e., flips (reflections), turns (rotations), and slides (translations)**

112, 452A-452B, 452-455, 462-463, 486, 491, 495, 504A, 676

4.2.4. Use motion geometry to show that shapes are congruent or similar

452A-452B, 452-453, 462-463, 491, 495

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING*No new [North Dakota] expectations at this level***Standard 3: Data Analysis, Statistics, and Probability**

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION****4.3.1. Determine a sample group to survey**

230B, 231

4.3.2. Collect and record data

188J, 206A-206B, 208A-208B, 211, 230A-230B, 230-231, 253

4.3.3. Organize and display data in line graphs and circle graphs

216B, 224, 342A, 536A-536B, 537, 541, 543, 564A

4.3.4. Read, interpret, and generate questions from data displayed in graphs; i.e., line graphs and circle graphs

96A, 216A-216B, 216-218, 222A, 223, 224-225, 229, 242, 245, 248-249, 252, 342A, 423, 536B, 536-537, 542-543, 549, 551, 555, 559, 564A, 677, 688A, 697

4.3.5. Use computers and spreadsheets to organize and display data

219

4.3.6. Use number lines and coordinate graphs to represent data

212B, 215, 219, 225, 338A, 688A-688B, 688-689, 692A-692B, 692-695, 698-699

PROBABILITY**4.3.7. Conduct simple probability experiments**

686J, 708-709, 710A

STATISTICAL METHODS**4.3.8. Determine or calculate the mode, mean/ average, and range for a data set**

226A-226B, 226-229, 231, 236-237, 242, 249, 253, 303, 355, 404A-404B, 404-405, 406A, 407, 411, 412B, 412, 414-415, 420-421, 423, 427, 431, 439, 489, 540A, 640

PREDICTIONS, DATA ANALYSIS AND INFERENCES**4.3.9. Make predictions and draw conclusions from simple probability experiments**

686J, 709, 710A-710B, 710-711

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS****4.4.1. State specific relationships between units within the same measuring system; e. g., feet to yards, minutes to hours, milliliters to liters**

50, 192A-192B, 193-194, 202-203, 242-243, 244, 246, 250, 289, 302, 315, 319, 354, 390A, 507, 540, 560J, 588B, 592A-592B, 596A-596B, 596-599, 600A, 602B, 604, 605, 611, 613, 617, 621, 657, 658B, 658-661, 666B, 668-669, 675, 676, 681, 685, 689, 695

4.4.2. Estimate and measure length to the nearest quarter inch

560J, 588A-588B, 588-589, 590A-590B, 590-591, 604-605, 616, 620

4.4.3. Analyze relationships between perimeter and area

432J, 470, 474A-474B, 474-475, 480, 487, 497

4.4.4. Make change up to \$20

32A-32B, 32-33, 37, 42-43, 48-49, 50, 55, 59, 73, 102A

4.4.5. Apply the concept of elapsed time; i.e., schedules, and calendars

50, 169, 178, 196A-196B, 196-197, 198A-198B, 198-199, 200A-200B, 200-201, 202-203, 205, 215, 219, 234A, 234, 242-243, 244, 246-247, 250-251, 302, 310, 354, 460A, 512B, 571, 592A, 612, 648A, 691

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**4.4.6. Select appropriate units for measuring perimeter, area, and volume**

422, 464A-464B, 466-467, 476B, 480-481, 493, 496-497, 501, 508A, 521, 550, 589, 624A, 675, 676

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****4.5.1. Determine the missing elements of complex repeating patterns**

90A-90B, 90-91, 93, 97, 113, 120, 128A, 355, 585

NUMERIC AND ALGEBRAIC REPRESENTATIONS**4.5.2. Explain that variables represent unknowns**

98A-98B, 100B, 160B

MATHEMATICAL MODELING**4.5.3. Solve problems with variables**

51, 98A-98B, 98-99, 100A-100B, 100-101, 105, 110, 167, 261, 314A, 384A, 396A-396B, 396-398, 430, 478A, 500A, 632A

4.5.4. Use parentheses in solving simple equations

700A

Further opportunity to meet this objective can be found on pages 96A-96B, 96-97, 160B, 161-163

RATES OF CHANGE

No new (North Dakota) expectations at this level

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks**

Grade Five

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

5.1.1. Identify place value from the billions through the thousandths place

2I, 5, 8A-8B, 8-11, 13, 14A-14B, 14-16, 20-21, 25, 31, 39, 41, 52-53, 57, 60-61, 69, 85, 97, 109, 348, 382

5.1.2. Order and compare whole numbers using symbols

6A-6B, 6-7, 21, 53, 54, 56, 60, 71, 103

5.1.3. Round whole numbers to the nearest million

26A-26B, 26-27, 31, 34-35, 61, 87

5.1.4. Read and represent numbers to 1,000,000 in standard, expanded, and short word form

4A-4B, 4-5, 14A, 17, 44B, 56, 180

5.1.5. Place integers on a number line

712A-712B, 714, 722

5.1.6. Use negative integers in real- world situations; e.g., thermometer reading, yardage in a football game

712A-712B, 712-715

5.1.7. Identify prime and composite numbers

164A-164B, 164-167, 305, 415, 417, 636

5.1.8. Round, order, and compare using symbols fractions with like and unlike denominators

404A-404B, 404-405, 409, 418A-418B, 418-419, 420A-420B, 420-423, 424-425, 430A, 447, 452, 455-456, 463, 569, 573, 582

5.1.9. Round, order, and compare using symbols decimals to the tenths, hundredths, and thousandths place

12A-12B, 12-13, 17, 21, 25, 26A-26B, 26-27, 31, 34-35, 37, 39, 44A, 52-53, 55, 56, 58, 60-61, 87, 91, 110B, 405, 447, 545, 582

5.1.10. Explain and demonstrate the concept of a percent

644J, 668A-668B, 668, 676A-676B

5.1.11. Compare equivalent fractions, decimals, and percents, e. g., $75/100 = .75 = 75\%$

426A-426B, 426-429, 430A-430B, 430-431, 437, 440-441, 446-447, 453, 457, 516, 533, 603, 668A-668B, 668-669, 670A-670B, 670-671, 676A, 678-679, 684, 690, 693

5.1.12. Represent ratios and percents as parts of a whole using models and pictures

644J, 646A-646B, 647, 648B, 650-651, 652A, 660A-660B, 668A-668B, 668, 676A-676B, 684, 688

5.1.13. Explain and demonstrate the relationship between exponential notation and repeated multiplication; e. g., $3^2 = 3 \times 3$

17, 167, 207

OPERATIONS AND THEIR PROPERTIES**5.1.14. Add and subtract whole numbers between 0 and 1,000, 000**

5, 8A, 21, 22A-22B, 22-25, 34-35, 36A-36B, 36-37, 39, 44-45, 46-47, 52-53, 57-59, 61-62, 72A, 103, 136A, 137, 180, 279, 316, 372A, 448, 473, 506-507, 582

5.1.15. Use commutative, associative, and identity properties to solve problems

25, 55, 66A-66B, 66-67, 75, 112, 122, 699

5.1.16. Use divisibility rules for 2, 5, and 10

162A-162B, 162-163, 180A, 276A

5.1.17. Determine the prime factors for a number using a factor tree

165, 166-167

5.1.18. Determine least common multiple

464A-464B, 464-465, 469, 501, 516-517

5.1.19. Determine greatest common factor

414A-414B, 414-415, 416A-416B, 416-417, 419, 424-425, 437, 447, 452, 456, 469, 582, 636

5.1.20. Use order of operations to simplify numeric expressions

172A-172B, 172-173, 301, 317, 417, 449, 517, 617, 701, 710

5.1.21. Multiply multi- digit numbers by three- digit numbers

76B, 76-77, 82-83, 87, 110

5.1.22. Divide multi- digit numbers by two- digit numbers with or without remainders

200I-200J, 202A-202B, 202-203, 214A-214B, 214-217, 218A-218B, 218-221, 222A-222B, 222-223, 224B, 224-225, 238B, 239, 302A, 316, 340A, 341, 342A, 355, 364A, 411, 462A, 506A, 539, 653

5.1.23. Add and subtract improper fractions and mixed numbers with unlike denominators

476A-476B, 476-477, 478A-478B, 478-481, 487, 488-489, 493, 514-515, 517, 519-521, 523

5.1.24. Add and subtract multi- digit decimals

2J, 6A, 38A-38B, 38-39, 40A-40B, 40-41, 44A, 44, 46-47, 52-53, 59, 63, 67, 91, 97, 316, 382, 477, 499, 553, 702A

5.1.25. Multiply and divide multi- digit decimals

64J, 84A-84B, 84-85, 88A-88B, 88-91, 92A-92B, 92-93, 94A-94B, 94-97, 98-99, 100A, 103, 110B, 110-111, 118-119, 120, 123-124, 127-128, 132A, 141, 160A-160B, 160-161, 181, 230A-230B, 230-231, 232A-232B, 232-233, 234A-234B, 234-237, 238A, 238-239, 269, 273, 305, 307, 355, 373, 382, 397, 431, 448, 449, 475, 506, 636, 669, 671, 684, 686, 715, 727

COMPUTATIONAL FLUENCY AND ESTIMATION*No new [North Dakota] content at this level***Standard 2: Geometry and Spatial Sense**

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION**TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS**

5.2.1. Describe properties and attributes of two- and three- dimensional figures; i.e., obtuse angle, acute angle, radius, chord, diagonal, equilateral triangle, isosceles triangle, parallel lines, perpendicular lines

54, 120, 326I-326J, 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-348, 355, 356B, 356-357, 358-359, 367, 372B, 373, 380-381, 382, 385-386, 389-390, 448, 516, 592I, 594A-594B, 594-597, 601, 609, 634, 636, 638, 686

5.2.2. Draw circles using a compass, and identify the components; i.e., radius, chord, diameter, center, and circumference

336A-336B, 336-337, 338-339, 341, 362, 380-381, 384, 388, 686

5.2.3. Identify the attributes of an angle and draw angles using protractors

332A, 333-335, 337, 338-339, 341, 349, 382, 384, 388, 555

5.2.4. Determine the degrees of the interior angles of triangles and quadrilaterals

343-344, 346A, 347-348, 352B, 352, 355, 359, 380, 382, 385, 389, 516

5.2.5. Determine the characteristics of, and the relationships among, points, lines, line segments, rays, and planes

328A-328B, 328-331, 338-339, 380, 382, 384, 388

COORDINATE GEOMETRY

5.2.6. Use ordered pairs in quadrant 1 of a coordinate grid

55, 174A-174B, 174-175, 176A-176B, 177, 651, 652A-652B, 652-653, 684-685, 687, 688, 691, 699

TRANSFORMATION AND SYMMETRY

5.2.7. Describe properties of congruent figures and use them to solve problems

360A-360B, 360-362, 374-375, 382, 386, 390

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

No new (North Dakota) expectations at this level

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION****5.3.1. Read and interpret bar, line, and circle graphs, pictographs, and frequency tables**

55, 88A, 92A, 262A-262B, 262-265, 266A-266B, 266-268, 276B, 277-278, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 314-315, 317, 318, 320, 322-324, 352A, 383, 426A, 449, 517, 583, 602A, 687, 696A

PROBABILITY**5.3.2. Determine the probability of a simple event and express it as a ratio**

180A, 299, 302A-302B, 302-305, 308-309, 314, 317, 321, 331, 360A, 383, 412A, 449, 517, 558A, 583, 594A, 637, 706A

5.3.3. State possible outcomes for a given situation

121, 123, 258J, 300A-300B, 300-301, 303, 308-309, 315, 321, 325

5.3.4. Determine possible arrangements of four or fewer items

12A, 58, 80B, 80-81, 83, 119, 305, 461

STATISTICAL METHODS**5.3.5. Determine or calculate the mode, mean, and range of a set of data**

258I, 282A-282B, 282-285, 306B, 307, 314-315, 319, 323, 383, 495, 500A, 517, 541, 583, 610A, 613, 637, 730

PREDICTIONS, DATA ANALYSIS AND INFERENCES**5.3.6. Make predictions and draw conclusions based on data collected from a sample group**

260A, 260-261, 269

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS****5.4.1. Estimate and measure length to the nearest eighth inch**

528A, 532A-532B, 532-533, 535, 580, 584, 588

5.4.2. Measure and apply elapsed time; i.e., time zones, schedules, and calendars

316, 564A-564B, 564-567, 568A, 569, 574-575, 581, 582, 587, 591, 636

5.4.3. Measure angles using protractors

332A-332B, 332-335, 338-339, 388

5.4.4. Estimate angle measures using the benchmark angles 45° , 90° , 180° , 270° , and 360°

332B, 335, 339, 380

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**5.4.5. Select and use appropriate units when measuring length, area, and volume**

316, 332B, 526J, 528A, 532A-532B, 532-533, 534A-534B, 534-535, 545, 546-547, 550B, 551, 553, 558A-558B, 559, 560-561, 572, 580, 581, 582, 584-585, 588-590, 597, 609, 610-613, 618-619, 635, 636, 639, 642

5.4.6. Use formulas to calculate the perimeter and area of squares and rectangles

540A-540B, 540-541, 545, 546-547, 550A-550B, 550-551, 558A-558B, 558-559, 560-561, 572B, 581, 582, 585, 589-590, 597, 609

5.4.7. Use formulas to calculate the volume of rectangular prisms

610A-610B, 610-613, 618-619, 634-635, 636, 639, 642, 686

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****5.5.1. Analyze patterns represented by tables and graphs**

55, 106A-106B, 106-107, 108A, 109, 112-113, 118-119, 125, 129, 135, 144A, 177, 317, 383, 644I, 652-653, 655, 656-657, 660-661, 685, 687, 688, 691-692, 694J, 720B, 720-721, 722

5.5.2. Identify a rule for a pattern involving addition, subtraction, or multiplication

106A-106B, 106-107, 108A, 109, 112-113, 118-119, 125, 129, 135, 317, 383, 661, 665, 694J, 721

5.5.3. Identify the rule for a pattern and then use the rule to solve a problem

106A-106B, 107, 661, 665

NUMERIC AND ALGEBRAIC REPRESENTATIONS**5.5.4. Identify a variable in an expression**

100A-100B, 100, 104B, 104

MATHEMATICAL MODELING**5.5.5. Use equations to solve problems; e. g., $28/x = 7$**

108B, 108, 224A, 226A, 484A, 490A, 668A, 700A-700B, 700-701, 702A-702B, 702-703, 706A-706B, 706-708, 710-711, 716A

RATES OF CHANGE

No new [North Dakota] expectations at this level

**Scott Foresman – Addison Wesley Mathematics
to the
North Dakota Mathematics Standards and Benchmarks
Grade Six**

Standard 1: Number and Operation

Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

6.1.1. Use a fraction to represent parts of a whole, division, or a ratio

160A-160B, 160-163, 165, 175, 182A-182B, 182-183, 184, 190, 195, 199-200, 228A-228B, 228-229, 298J, 300A-300B, 300-301, 302A-302B, 302-305, 309, 314-315, 316A-316B, 333, 334A, 334, 342-343, 346, 349, 521

6.1.2. Explain and use whole number percents 1 to 100

352I-352J, 354A-354B, 354-357, 361, 362A, 362-363, 364-365, 366A-366B, 366-367, 368A-368B, 368-369, 370A-370B, 370-371, 374B, 374-375, 377, 378-379, 380A-380B, 380-383, 384A-384B, 384-385, 386A-386B, 386-387, 388A-388B, 388-389, 390-391, 396-397, 398-399, 400-402, 403-405, 408A, 410A, 411, 450, 461, 514A, 530, 569, 575, 581, 597

6.1.3. Find the equivalent forms among fractions, decimals, and whole number percents

140J, 172A-172B, 172-175, 179, 184-185, 191, 205, 209, 251, 269, 354A-354B, 358A-358B, 358-361, 364-365, 366A-366B, 366-367, 368A-368B, 396-397, 400-401, 403, 520B, 520, 530

6.1.4. Compare and order fractions, decimals, mixed numbers and integers

78A-78B, 78-79, 81, 84-85, 128, 132, 136, 176A-176B, 176-178, 184-185, 191, 192, 197, 201, 205, 361, 406I, 410A-410B, 410-411, 412A-412B, 412-413, 416-417, 421, 422A, 425, 437, 450B, 451, 458, 459, 460, 462, 466, 501, 608

6.1.5. Generate a list of factors, prime factors, and multiples

140I, 146A-146B, 146-148, 150A-150B, 152A-152B, 199

6.1.6. Use rules to determine divisibility by 2, 3, 5, 6, 9, and 10

142A, 142-144, 149, 158, 159, 169, 190-191, 192, 194, 198

OPERATIONS AND THEIR PROPERTIES**6.1.7. Explain the effects of arithmetic operations on fractions and decimals**

74I, 74J, 86A, 90A, 100A, 202J, 204A, 220A, 246I-246J, 252J, 258A

6.1.8. Identify the uses of the commutative and associative properties of addition and multiplication; e.g., grouping numbers to make addition or multiplication easier

28A-28B, 28-29, 39

6.1.9. Use order of operations; i.e., multiplication, division, addition and subtraction, to simplify numeric expressions

2J, 24A-24B, 24-26, 35, 38-39, 51, 62, 65, 67, 71, 93, 223, 251

COMPUTATIONAL FLUENCY AND ESTIMATION**6.1.10. Multiply and divide decimals**

24A, 74J, 90A-90B, 90-93, 97, 100A-100B, 100-103, 104-105, 106A, 109, 111, 120A-120B, 120-121, 128, 130, 133-134, 137-138, 142A, 149, 171, 226A-228B, 228, 323, 337, 344, 367, 388, 520, 545, 608, 633

6.1.11. Add, subtract, multiply, and divide fractions

202I-202J, 204A-204B, 204-205, 206A-206B, 206-209, 214-215, 217, 218A-218B, 218-219, 220A-220B, 220-223, 224A-224B, 224-225, 228A, 230-231, 236-237, 238, 240-241-242, 243-245, 246I-246J, 248A-248B, 248-251, 252A-252B, 252-255, 257, 258A-258B, 258-259, 260-261, 264A, 266A-266B, 266-269, 270A-270B, 270-271, 272-273, 275, 276A, 278A, 280A-280B, 280-281, 288-289, 290, 292-294, 295-297, 301, 302A, 320, 334A, 357, 398, 414A, 428A, 448A, 460, 472A, 530-531, 545, 549, 554A

6.1.12. Express an exponent in standard form

8B, 8-11, 13, 15, 17, 22, 62-63, 66, 70

6.1.13. Use problem solving strategies to solve and verify the results of problems

52A-52B, 52-53, 56-57, 69, 73, 116A-116B, 116-119, 122, 156A-156B, 156-157, 158, 212A-212B, 212-213, 214, 264A-264B, 264-265, 272, 312A-312B, 312-313, 314, 374A-374B, 374-377, 434A-434B, 434-437, 490A-490B

6.1.14. Estimate the results of problems involving whole numbers, fractions, and decimals

23, 54B, 82A, 82B, 82-83, 128, 216B, 217, 226A, 226-227, 231, 237, 245, 256B, 256-257, 283, 295, 389, 576A

Standard 2: Geometry and Spatial Sense

Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION**TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS****6.2.1. Identify relationships between pairs of angles; i. e., adjacent, vertical, complementary, and supplementary**

470I, 480A-480B, 480-483, 487, 492-493, 509, 519, 528-529, 532, 536

6.2.2. Identify polygons; i.e., triangle, rectangle, square, rhombus, parallelogram, trapezoid, pentagon, hexagon, octagon

238, 290, 494A-494B, 494-495, 501, 504-505, 512B, 513, 515, 522, 528-529, 533, 535, 537-538

6.2.3. Describe the characteristics of a right triangle

496A-496B, 497-499

COORDINATE GEOMETRY**6.2.4. Use ordered pairs to locate a point on a coordinate plane**

440A-440B, 440-443, 447, 448A-448B, 448-449, 452-453, 458-459, 465, 469, 511, 512, 530

TRANSFORMATION AND SYMMETRY**6.2.5. Identify, describe, and model motion geometry; i. e., rotations, reflections, and translations**

510A-510B, 510-511, 512A, 512, 515, 522-523, 534, 539, 564A

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING**6.2.6. Draw basic geometric figures using appropriate tools; i.e., circle with a compass, triangle and rectangle with a ruler or straight edge**

494, 497-499, 500B, 501, 502A-502B, 502-503, 537-538

Standard 3: Data Analysis, Statistics, and Probability

Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION**DATA COLLECTION, DISPLAY, AND INTERPRETATION**

6.3.1. Collect and organize data, select and use an appropriate display; i. e., a frequency table, a line and bar graph

620A-620B

PROBABILITY

6.3.2. Count possible outcomes using lists

48A, 264A-264B, 264-265, 272, 289, 296, 316A, 318A, 561, 572A, 668A-668B

6.3.3. Use experiments or simulations to determine probabilities

664A-664B, 665, 672B

6.3.4. Use decimal values and ratios to represent probability

131, 176A, 239, 291, 324A, 345, 374A, 399, 440A, 461, 476A, 531

STATISTICAL METHODS

6.3.5. Calculate the mean, median, mode, and range of a set of data

193, 216A, 238, 291, 345, 609, 624A-624B, 624-627, 628A-628B, 629-631, 632A-632B, 633, 634-635

PREDICTIONS, DATA ANALYSIS AND INFERENCES

6.3.6. Make predictions based on trends identified in tables and graphs

366A, 552A, 638A-638B, 638-640, 645, 649, 652-653, 657, 684, 689, 691, 693

Standard 4: Measurement

Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION**MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS****6.4.1. Measure length to the nearest sixteenth of an inch**

550A-550B, 550-551, 562-563, 610, 614

6.4.2. Select an appropriate unit of measure; e. g., What unit do you use to measure a person's height?

64, 546A, 546, 548

6.4.3. Convert unit measurements within the same system (metric and standard)

64, 130, 212A, 290, 344, 398, 450A, 542A-542B, 542-544, 546B, 547-549, 551, 562-563, 606-607, 610, 614

6.4.4. Distinguish between perimeter, area, surface area, and volume

238, 564A, 568A, 570A-570B, 570-571, 575, 584-585, 590A, 594A, 606, 608, 612, 616

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS**6.4.5. Select appropriate tools and units to determine the measurements needed for calculating perimeter, circumference, area, surface area, and volume**

110A, 130, 192, 290, 344, 540I-540J, 564A-564B, 566, 568B, 569, 570B, 571, 573-574, 579, 581, 584-585, 592, 594, 596-597, 598, 600-601, 607, 608, 611-613, 615-617, 623

6.4.6. Use formulas to determine the circumference and area of circles and the perimeter and area of triangles and parallelograms

344, 398, 460, 570A-570B, 570-571, 572A-572B, 572-575, 576A-576B, 576-579, 580A-580B, 580-581, 582A, 584-585, 598A, 598, 607, 608, 612, 615-616, 623

6.4.7. Use area formulas to determine the surface area of right prisms and square pyramids

192, 590A-590B, 590-593, 597, 600-601, 606, 608, 617

6.4.8. Use formulas to determine the volume of rectangular prisms

594A, 594, 596, 598B, 600-601, 606, 613, 617

Standard 5: Algebra, Functions, and Patterns

Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION**PATTERNS, RELATIONS, AND FUNCTIONS****6.5.1. Identify and describe patterns represented by tables, graphs, and sequences**

131, 193, 212A-212B, 212-213, 214, 237, 240, 291, 298I-298J, 305, 452, 459, 461, 567, 589, 609, 716A-716B, 716-717

NUMERIC AND ALGEBRAIC REPRESENTATIONS**6.5.2. Use a variable to represent an unknown quantity**

44B, 48B, 54, 86A, 112A-112B, 116A-116B, 116-118, 122-123, 129, 135, 139, 145, 248A, 276B, 277, 291, 418A, 520, 624A, 696I

MATHEMATICAL MODELING**6.5.3. Use representations to solve problems; i.e., tables and numerical sentences**

44B, 48B, 78A, 80A, 86A, 112A, 116A-116B, 116-118, 122-123, 129, 135, 139, 145, 156A-156B, 156-157, 158-159, 163, 191, 195, 199, 248A, 276B, 318A-318B, 318, 418A, 421, 444A-444B, 444-447, 520, 554A, 624A

RATES OF CHANGE**6.5.4. Recognize examples of change over time; e.g. growth of a sixth grader from September to May**

306A, 638A-638B, 638-640, 645, 648A-648B, 648, 652-653, 657, 684, 689, 693