

A Correlation of

Scott Foresman • Addison Wesley

en**Vision**MATH™

to the



Wisconsin WKCE-CRT Assessment Framework for Mathematics Grades K - 6



G/M-260

Correlation Introduction

This correlation is designed to show the close alignment between Scott Foresman-Addison Wesley enVisionMATH and the Wisconsin WKCE-CRT Assessment Framework for Mathematics. Correlation page references are to the Teacher’s Edition and Student Edition.

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

Personalized Curriculum

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

Instructional Design

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

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

Differentiated Instruction

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

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**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 3
Grade K**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

- **Use reasoning and logic to:**
 - **Perceive patterns**
 - **Identify relationships**
 - **Formulate questions**
 - **Pose problems**
 - **Make conjectures**
 - **Justify strategies**
 - **Test reasonableness of results**

11-12A, 41-42C, 69-70C, 95-96C, 161-162C, 171-172C, 231-232C, 265- 266A, 266C, 299-300A, 301-302C

- **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

27-28C, 69-70C, 95-96C, 109-110C, 131-132C, 141-142C, 147-148, 189-190, 283-284

- **Connect mathematics to the real world, as well as within mathematics.**

17-18C, 19A-20C, 21A-22C, 23A-24C, 25A-26C, 227-228C, 253-254A, 254C, 255-256A, 256C, 257-258A, 258C, 271-272A, 273-274A, 275-276A, 297-298A

- **Create and use representations to organize, record, and communicate mathematical ideas.**

69-70C, 95-96C, 147-148G, 189-190C

- **Solve and analyze routine and non-routine problems.**

Representative pages: 11-12A, 41-42C, 69-70C, 95-96C, 161-162C, 171-172C, 231-232C, 265- 266, 299- 300A, 301-302C

Objective B: Number Operations and Relationships

Subskill B.a.: Concepts

Descriptors, such as but not limited to

- **Recognize and apply place-value concepts to whole numbers less than 1,000**

101-102C, 105-106C, 227-228C

- **Read, write, and represent numbers using words, numerals, pictures (e.g. base-ten blocks), number lines, , arrays, expanded forms ($24=20+4$) and symbolic renaming e.g., $24=30-6$.**
51A- 54A, 54C, 57A- 58A, 58C, 59, 60, 62C, 69A- 70C, 79, 80, 80B, 80C, 84C, 85- 86A, 86C, 88C, 91- 92C, 93A-94A, 94C, 213- 214A, 214C, 216, 216A, 216C, 218A, 218C, 220A, 220C
- **Compare and order whole numbers less than 1,000**
63-64C, 65A-66C, 67A-68C, 101-102C, 10A3-104C, 105A-106C, 107A-108C
- **Count by 2s, 3s, 5s, 10s, 25s and 100s**
227- 228C, 229- 230C
- **Count, compare and make change using a collection of coins (up to one dollar) and one-dollar bills.**
237A-238C, 239A-240C, 241A-242C, 243A-244C, 371A-374B, 375A-378B, 379A-382B
- **Identify a fractional part of a collection/set.**
137, 138, 138A, 138B, 138C, 139, 140, 140A, 140B, 140C
- **Read, write and represent fractional parts of a whole e.g., $\frac{1}{4}$, $\frac{1}{2}$.**
Related content: 137, 138, 138A, 138B, 138C, 139, 140, 140A, 140B, 140C

Subskill B.b.: Computation

Descriptors, such as but not limited to

- **Use addition and subtraction in everyday situations and solve one-step word problems.**
175G, 177-187C, 179-180C, 181-182C, 183-184C, 185-186C, 187-188C, 189-190C, 193I-193J, 195-196C, 197-198C, 199-200C, 201-202C, 203-204C, 205-206C, 207-208C
- **Solve single and double-digit addition and subtraction problems with regrouping including horizontal format in problems with and without context.**
186C, 188C
- **Demonstrate the concept of multiplication as grouping or repeated addition in context with products up to 50.**
This concept is introduced in Grade 2: 589A-589D, 589F-H, 589, 591A, 591, 594B, 595-598B, 599-602B, 603-606B, 611-614B
- **Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 30 and divisors up to 5).**
This concept is introduced in Grade 2: 617A-617H, 617-618, 619A-622B, 623-626B
- **Use fractions to represent quantities when solving problems involving equal sharing or partitioning.**
137- 138C, 139- 140C
- **Represent with shaded circles, rods, squares, pictorial representations of a whole.**
137, 138, 138A, 138B, 138C, 139, 140, 140A, 140b, 140C

- **Estimate sums to tens and hundreds and differences to ten.**

Related content: 175G, 177-187C, 179-180C, 181-182C, 183-184C, 185-186C, 187-188C, 189-190C, 193I-193J, 195-196C, 197-198C, 199-200C, 201-202C, 203-204C, 205-206C, 207-208C

- **Determine reasonableness of answers.**

11-12A, 207A, 207, 265- 266A, 266C, 299-300A

Objective C: Geometry

Subskill C.a.: Describing figures

Descriptors, such as but not limited to

- **Identify, describe, and compare properties of 2 and 3 dimensional figures such as squares, triangles, rectangles, circles, pattern block shapes, cubes, pyramids, rectangular prisms, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).**

9, 10, 10A, 10B, 10C, 11, 12, 12A, 115, 116, 116A, 116B, 117, 117A, 118, 118A, 118B, 118C

Subskill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Identify 2-dimensional geometric shapes created by combining or decomposing other shapes e.g., square/triangles; trapezoid/rhombus, triangle; hexagon/triangles, rhombus, trapezoid.**

119-120C

- **Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.**

Related content: 121-122C

Subskill C.c.: Coordinate systems

Descriptors, such as but not limited to

- **Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates of letters and numbers, (e.g., (E, 3)).**

This concept is introduced in Grade 2: 491-494B

Objective D: Measurement

Subskill D.a.: Measurable attributes

Descriptors, such as but not limited to

- **Describe attributes of length, time and temperature and identify appropriate units to measure them. Units include: inches, feet, yards, centimeters, meters, seconds, minutes, hours, days, months, years and degrees Fahrenheit/Celsius.**

159-160C, 259-260C, 261-262C, 281-282C

- **Compare attributes of length and weight by observation or when given actual measurements.**

153A- 154A, 154C, 155A, 155-156A, 156C, 157A- 158A, 158C, 161A-162B, 167A-168A, 168C

Subskill D.b.: Direct measurement***Descriptors, such as but not limited to***

- **Read and interpret measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter or 1/2-inch.**

159-160C

- **Read thermometers to the nearest 5 degrees F/C.**

Related content: 281-282C

- **Tell time to the nearest minute using analog and digital clocks; translate time from analog to digital clocks and vice versa.**

261-262C

- **Investigate measurements of area.**

This concept is introduced in Grade 2: 403A-406B, 407-410B

Subskill D.c.: Indirect measurement***Descriptors, such as but not limited to***

- **Apply estimation techniques using non-standard units.**

161-162C, 171-172C

Objective E: Statistics and Probability**Subskill E.a.: Data analysis and statistics*****Descriptors, such as but not limited to***

- **Answer and pose questions about collecting, organizing and displaying data. Work with data in the context of real-world situations by determining what data to collect and when and how to collect it to answer questions.**

291-292C

- **Collect, organize and display data in simple bar graphs and charts including translating data from one form to the other.**

291, 292, 292A, 292B

- **Draw reasonable conclusions based on simple interpretations of data.**

289-290A, 290C, 292, 292A, 293, 294, 294A, 295, 296, 296A, 296B, 296C

- **Read, use information and draw reasonable conclusions from data in graphs, tables, charts and Venn diagrams.**

289-290A, 290C, 292, 292A, 293, 294, 294A, 295, 296, 296A, 296B, 296C

Subskill E.b.: Probability***Descriptors, such as but not limited to***

- **Determine if the occurrence of future events are more, less or equally likely to occur.**

299-300C

- **Choose a fair and an unfair spinner.**

This concept is introduced in Grade 1: 577-580B

Objective F: Algebraic Relationships**Subskill F.a.: Patterns, relations and functions*****Descriptors, such as but not limited to***

- Recognize, extend, describe, create and replicate a variety of patterns including attribute, number and geometric patterns.

Such as:

- Picture patterns
- Patterns in tables and charts
- “What’s-my-rule?” patterns
- Patterns using addition and subtraction rules.

31A-31J, 32, 33-34C, 35-36C, 37-38C, 39-40C, 41-42C, 43-44C, 45-46C

- Focusing on relationships within patterns as well as extending patterns e.g., patterns and relationships represented with pictures, tables and charts, and “what’s-my-rule?” patterns using addition and subtraction rules.

225-226C, 229-230C

- Determine odd or even with a total set of 20 or less.

221-222C

Subskill F.b.: Expressions, equations and inequalities***Descriptors, such as but not limited to***

- Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.

185-186A, 186C, 187-188A, 188C, 190C, 202C, 203-204C, 205-206C

- Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).

183-184C, 185-186A, 186C, 187-188A, 188C, 190C, 201-202C, 202C, 203-204C, 205-206C

Subskill F.c.: Properties***Descriptors, such as but not limited to***

- Use properties and or relationships of arithmetical thinking to determine and to reason about what number goes in a “box” to make a number sentence true,
 - identity property of e.g., zero Ex: property $12 + 0 =$ “box”adding 1 to any number, commutative property for addition of single-digits

177-178C, 180C, 182-182A, 182C, 184-184C, 186A, 186C, 188, 188C, 197-198A, 199-200, 200B-200C, 201, 202B-202C, 203-204C, 205-206B, 207A

- Use simple equations in a variety of ways to demonstrate the properties above.

187-188C, 205-206C

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 3
Grade One**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

• **Use reasoning and logic to:**

- **Perceive patterns**
- **Identify relationships**
- **Formulate questions**
- **Pose problems**
- **Make conjectures**
- **Justify strategies**
- **Test reasonableness of results**

15-22, 243-257, 275-286, 295-298, 403-406, 406B, 413, 437, 487, 531, 623, 629-632

• **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

23-26, 26B, 43-46, 46B, 75-78, 78B, 111-114, 114B, 135-138, 138B, 163-166, 166B, 187-190, 190B, 223-226, 226B, 255-258, 258B, 259-298, 298B, 323-326, 326B, 359-362, 362B, 387-390, 390B, 403-406, 406B, 473-476, 476B, 493-494, 494B, 509-512, 512B, 533-536, 536B, 569-572, 572B, 601-604, 604B, 637-640, 640B

• **Connect mathematics to the real world, as well as within mathematics.**

23-26, 26B, 43-46, 46B, 75-78, 78B, 111-114, 114B, 135-138, 138B, 163-166, 166B, 187-190, 190B, 223-226, 226B, 255-258, 258B, 259-298, 298B, 323-326, 326B, 359-362, 362B, 387-390, 390B, 403-406, 406B, 473-476, 476B, 493-494, 494B, 509-512, 512B, 533-536, 536B, 569-572, 572B, 601-604, 604B, 637-640, 640B

• **Create and use representations to organize, record, and communicate mathematical ideas.**

23-26, 26B, 43-46, 46B, 75-78, 78B, 111-114, 114B, 135-138, 138B, 163-166, 166B, 187-190, 190B, 223-226, 226B, 255-258, 258B, 259-298, 298B, 323-326, 326B, 359-362, 362B, 387-390, 390B, 403-406, 406B, 473-476, 476B, 493-494, 494B, 509-512, 512B, 533-536, 536B, 569-572, 572B, 601-604, 604B, 637-640, 640B

• **Solve and analyze routine and non-routine problems.**

23-26, 26B, 43-46, 46B, 75-78, 78B, 111-114, 114B, 135-138, 138B, 163-166, 166B, 187-190, 190B, 223-226, 226B, 255-258, 258B, 259-298, 298B, 323-326, 326B, 359-362, 362B, 387-390, 390B, 403-406, 406B, 473-476, 476B, 493-494, 494B, 509-512, 512B, 533-536, 536B, 569-572, 572B, 601-604, 604B, 637-640, 640B

Objective B: Number Operations and Relationships**Subskill B.a.: Concepts***Descriptors, such as but not limited to*

- **Recognize and apply place-value concepts to whole numbers less than 1,000**
263-266, 266B, 267-270, 270B, 274, 274B, 303-306B, 311-314B, 315-318B, 319-322B
- **Read, write, and represent numbers using words, numerals, pictures (e.g. base-ten blocks), number lines, , arrays, expanded forms ($24=20+4$) and symbolic renaming e.g., $24=30-6$.**
3A, 3-6, 6B, 7A, 7-10B, 11-14B, 15-18, 18B, 19A, 19-22B, 23A, 23-26B, 263A, 236-266B, 267A, 267-270B, 307-310B, 311A, 311-314B, 315A, 315-128B, 319A, 319-322B, 323A, 323-326B
- **Compare and order whole numbers less than 1,000**
31-34, 34B, 35-38B, 39-42B, 43-46B, 339-342B, 343-346B, 355A-358B
- **Count by 2s, 3s, 5s, 10s, 25s and 100s**
261B-261F, 271-274, 274B, 275-278B, 279-282B, 291-294B, 295-298B
- **Count, compare and make change using a collection of coins (up to one dollar) and one-dollar bills.**
367-370B, 371374B, 375-378B, 379-382B, 383-386B
- **Identify a fractional part of a collection/set.**
593-596B, 597-600B
- **Read, write and represent fractional parts of a whole e.g., $\frac{1}{4}$, $\frac{1}{2}$.**
589-592B

Subskill B.b.: Computation*Descriptors, such as but not limited to*

- **Use addition and subtraction in everyday situations and solve one-step word problems.**
51-54B, 55-58B, 59-62B, 63-66B, 67-70B, 711-74, 81-82B, 83-86B, 87-90B, 91-94B, 95-98B, 99-102B, 103-106B, 107-110B, 111-114B, 143-146B, 147-150B, 151-154, 155-158B, 159-162B, 163-166B, 171-175B, 175-178B, 179-182B, 183-186B, 187-190B, 481-484, 319-322, 485-488, 489-492, 493-496, 497-500, 501-504, 505-508, 509-512B, 517-520B, 521-524B, 525-528B, 529-532B, 533-536B, 609-612B, 613-616B, 617-620B, 621-624B, 625-628B, 629-632B, 633-636B
- **Solve single and double-digit addition and subtraction problems with regrouping including horizontal format in problems with and without context.**
607, 621-624B, 633-636B
- **Demonstrate the concept of multiplication as grouping or repeated addition in context with products up to 50.**
This concept is introduced in Grade 2: 589A-589D, 589F-H, 589, 591A, 591, 594B, 595-598B, 599-602B, 603-606B, 611-614B

- **Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 30 and divisors up to 5).**

This concept is introduced in Grade 2: 617A-617H, 617-618, 619A-622B, 623-626B

- **Use fractions to represent quantities when solving problems involving equal sharing or partitioning.**

589-592B, 593-596B, 597-600B, 601-604B

- **Represent with shaded circles, rods, squares, pictorial representations of a whole.**

585-588B, 589-592B

- **Estimate sums to tens and hundreds and differences to ten.**

Related content: 51-54B, 55-58B, 59-62B, 63-66B, 67-70B, 71-74, 81-82B, 83-86B, 87-90B, 91-94B, 95-98B, 99-102B, 103-106B, 107-110B, 111-114B, 143-146B, 147-150B, 151-154, 155-158B, 159-162B, 163-166B, 171-175B, 175-178B, 179-182B, 183-186B, 187-190B, 481-484, 319-322, 485-488, 489-492, 493-496, 497-500, 501-504, 505-508, 509-512B, 517-520B, 521-524B, 525-528B, 529-532B, 533-536B, 609-612B, 613-616B, 617-620B, 621-624B, 625-628B, 629-632B, 633-636B

- **Determine reasonableness of answers.**

487, 531, 623, 631

Objective C: Geometry

Subskill C.a.: Describing figures

Descriptors, such as but not limited to

- **Identify, describe, and compare properties of 2 and 3 dimensional figures such as squares, triangles, rectangles, circles, pattern block shapes, cubes, pyramids, rectangular prisms, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).**

193C, 193-194, 195-198B, 199-202B, 227-230B, 231-234B, 235-238B

Subskill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Identify 2-dimensional geometric shapes created by combining or decomposing other shapes e.g., square/triangles; trapezoid/rhombus, triangle; hexagon/triangles, rhombus, trapezoid.**

203-206B, 207-210B

- **Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.**

211-214B

Subskill C.c.: Coordinate systems

Descriptors, such as but not limited to

- **Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates of letters and numbers, (e.g., (E, 3)).**

This concept is introduced in Grade 2: 491-494B

Objective D: Measurement**Subskill D.a.: Measurable attributes*****Descriptors, such as but not limited to***

- Describe attributes of length, time and temperature and identify appropriate units to measure them. Units include: inches, feet, yards, centimeters, meters, seconds, minutes, hours, days, months, years and degrees Fahrenheit/Celsius.

395-398B, 399-402B, 403-406B, 407-410B, 411-414B, 443-446B, 453-456B, 457-460B, 461-464B, 465-468B, 469-472B

- Compare attributes of length and weight by observation or when given actual measurements.

395-398B, 431-434B

Subskill D.b.: Direct measurement***Descriptors, such as but not limited to***

- Read and interpret measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter or 1/2-inch.

407-410B, 411-414B

- Read thermometers to the nearest 5 degrees F/C.

Related content: 443-446B

- Tell time to the nearest minute using analog and digital clocks; translate time from analog to digital clocks and vice versa.

453-456B, 457-460B, 461-464B

- Investigate measurements of area.

This concept is introduced in Grade 2: 403A-406B, 407-410B

Subskill D.c.: Indirect measurement***Descriptors, such as but not limited to***

- Apply estimation techniques using non-standard units.

399-402B

Objective E: Statistics and Probability**Subskill E.a.: Data analysis and statistics*****Descriptors, such as but not limited to***

- Answer and pose questions about collecting, organizing and displaying data. Work with data in the context of real-world situations by determining what data to collect and when and how to collect it to answer questions.

557-560, 560B, 561-564, 564B, 565-568, 568B, 569-572, 572B

- Collect, organize and display data in simple bar graphs and charts including translating data from one form to the other.

557-560, 560B, 561-564, 564B, 565-568, 568B, 569-572, 572B

- **Draw reasonable conclusions based on simple interpretations of data.**
541-544, 544B, 545-548, 548B, 549-552, 552B, 557-560, 560B, 561-564, 564B, 565-568, 568B, 569-572, 572B
- **Read, use information and draw reasonable conclusions from data in graphs, tables, charts and Venn diagrams.**
541-544, 544B, 545-548, 548B, 549-552, 552B, 557-560, 560B, 561-564, 564B, 565-568, 568B, 569-572, 572B

Subskill E.b.: Probability***Descriptors, such as but not limited to***

- **Determine if the occurrence of future events are more, less or equally likely to occur.**
573-576B, 577-580B
- **Choose a fair and an unfair spinner.**
577-580B

Objective F: Algebraic Relationships**Subskill F.a.: Patterns, relations and functions*****Descriptors, such as but not limited to***

- **Recognize, extend, describe, create and replicate a variety of patterns including attribute, number and geometric patterns.**

Such as:

- **Picture patterns**
- **Patterns in tables and charts**
- **“What’s-my-rule?” patterns**
- **Patterns using addition and subtraction rules.**

15-18, 18B, 20, 243-246B, 247-250B, 251-254B, 255A-258B

- **Focusing on relationships within patterns as well as extending patterns e.g., patterns and relationships represented with pictures, tables and charts, and “what’s-my-rule?” patterns using addition and subtraction rules.**

15-18, 18B, 20, 243-246B, 247-250B, 251-254B, 255A-258B

- **Determine odd or even with a total set of 20 or less.**

261, 283-286, 286B

Subskill F.b.: Expressions, equations and inequalities***Descriptors, such as but not limited to***

- **Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.**

340-342, 342B

- **Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).**

163-166B, 187-190B, 533-536B

Subskill F.c.: Properties***Descriptors, such as but not limited to***

- Use properties and or relationships of arithmetical thinking to determine and to reason about what number goes in a “box” to make a number sentence true,
 - identity property of e.g., zero Ex: property $12 + 0 =$ “box”adding 1 to any number, commutative property for addition of single-digits

143-146, 146B

- Use simple equations in a variety of ways to demonstrate the properties above.

143-146, 146B, 163-166B, 187-190B, 533-536B

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 3
Grade Two**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

• **Use reasoning and logic to:**

- **Perceive patterns**
- **Identify relationships**
- **Formulate questions**
- **Pose problems**
- **Make conjectures**
- **Justify strategies**
- **Test reasonableness of results**

27-30, 30B, 63-66, 66B, 91-94, 94B, 135-138, 138B, 163-165, 165B, 187-190, 190B, 211-214, 214B, 243-245, 245B, 275-278, 278B, 307-310, 310B, 343-345, 345B, 371-374, 374B, 443-446, 446B, 471-473, 473B, 503-505, 505B, 543-546, 546B, 583-586, 586B, 611-614, 614B, 635-638, 638B

• **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

27-30, 30B, 63-66, 66B, 91-94, 94B, 135-138, 138B, 163-165, 165B, 187-190, 190B, 211-214, 214B, 243-245, 245B, 275-278, 278B, 307-310, 310B, 343-345, 345B, 371-374, 374B, 443-446, 446B, 471-473, 473B, 503-505, 505B, 543-546, 546B, 583-586, 586B, 611-614, 614B, 635-638, 638B

• **Connect mathematics to the real world, as well as within mathematics.**

27-30, 30B, 63-66, 66B, 91-94, 94B, 135-138, 138B, 163-165, 165B, 187-190, 190B, 211-214, 214B, 243-245, 245B, 275-278, 278B, 307-310, 310B, 343-345, 345B, 371-374, 374B, 443-446, 446B, 471-473, 473B, 503-505, 505B, 543-546, 546B, 583-586, 586B, 611-614, 614B, 635-638, 638B

• **Create and use representations to organize, record, and communicate mathematical ideas.**

63-66, 66B, 243-245, 245B, 611-614, 614B

• **Solve and analyze routine and non-routine problems.**

27-30, 30B, 63-66, 66B, 91-94, 94B, 135-138, 138B, 163-165, 165B, 187-190, 190B, 211-214, 214B, 243-245, 245B, 275-278, 278B, 307-310, 310B, 343-345, 345B, 371-374, 374B, 443-446, 446B, 471-473, 473B, 503-505, 505B, 543-546, 546B, 583-586, 586B, 611-614, 614B, 635-638, 638B

Objective B: Number Operations and Relationships**Subskill B.a.: Concepts***Descriptors, such as but not limited to*

- **Recognize and apply place-value concepts to whole numbers less than 1,000**
97A, 97C-97H, 99-102B, 103-106B
- **Read, write, and represent numbers using words, numerals, pictures (e.g. base-ten blocks), number lines, , arrays, expanded forms ($24=20+4$) and symbolic renaming e.g., $24=30-6$.**
97A, 97C-97H, 99-102B, 103-106B, 107-110B
- **Compare and order whole numbers less than 1,000**
111-114B, 115-118B, 119-122B, 123-126B
- **Count by 2s, 3s, 5s, 10s, 25s and 100s**
127-130B
- **Count, compare and make change using a collection of coins (up to one dollar) and one-dollar bills.**
141A-141H, 141-142, 143A-146B, 147A-150B, 151A-154B, 155A-158B, 159A-162B, 163A-166B
- **Identify a fractional part of a collection/set.**
367-370B
- **Read, write and represent fractional parts of a whole e.g., $\frac{1}{4}$, $\frac{1}{2}$.**
351-354B, 355A-358B, 359A-362B

Subskill B.b.: Computation*Descriptors, such as but not limited to*

- **Use addition and subtraction in everyday situations and solve one-step word problems.**
6, 7-10B, 14-14B, 15-18B, 26, 30, 35-38B, 42, 46, 54, 58, 58B, 62, 66, 78, 78B, 82, 86, 90, 90B, 92-94, 222, 226B, 234, 238, 254, 258, 262, 266, 274, 276-278B, 286, 286B, 287-290B, 294, 298, 306, 308-310B, 554, 554B, 556-558, 558B, 562, 566, 566B, 570, 570B, 571, 574, 574B, 578, 579, 582
- **Solve single and double-digit addition and subtraction problems with regrouping including horizontal format in problems with and without context.**
223B-226B, 22B7-230B, 255B-258B, 259B-262B
- **Demonstrate the concept of multiplication as grouping or repeated addition in context with products up to 50.**
589A-589D, 589F-H, 589, 591A, 591, 594B, 595-598B, 599-602B, 603-606B, 611-614B
- **Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 30 and divisors up to 5).**
617A-617H, 617-618, 619A-622B, 623-626B

- **Use fractions to represent quantities when solving problems involving equal sharing or partitioning.**
315A-354B, 367-370B, 371-374B
- **Represent with shaded circles, rods, squares, pictorial representations of a whole.**
349B-349C, 349F, 349, 350, 351A-354B, 355A-358, 358B, 359A, 360-362B
- **Estimate sums to tens and hundreds and differences to ten.**
287-290B, 299-302B, 555-558B, 571-574B
- **Determine reasonableness of answers.**
91-94B, 275-278B

Objective C: Geometry

Subskill C.a.: Describing figures

Descriptors, such as but not limited to

- **Identify, describe, and compare properties of 2 and 3 dimensional figures such as squares, triangles, rectangles, circles, pattern block shapes, cubes, pyramids, rectangular prisms, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).**
313B, 315-318B, 319-322B, 323-326, 327-330, 331-334

Subskill C.b.: Spatial relationships and transformations

335-338

Descriptors, such as but not limited to

- **Identify 2-dimensional geometric shapes created by combining or decomposing other shapes e.g., square/triangles; trapezoid/rhombus, triangle; hexagon/triangles, rhombus, trapezoid.**
327-330, 331-334
- **Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.**
335-338

Subskill C.c.: Coordinate systems

Descriptors, such as but not limited to

- **Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates of letters and numbers, (e.g., (E, 3)).**
491-494B

Objective D: Measurement**Subskill D.a.: Measurable attributes*****Descriptors, such as but not limited to***

- Describe attributes of length, time and temperature and identify appropriate units to measure them. Units include: inches, feet, yards, centimeters, meters, seconds, minutes, hours, days, months, years and degrees Fahrenheit/Celsius.

379A-382B, 383-386B, 387A-390B, 391A-394B, 395-398B, 451-454B, 455-458B, 463-466B, 467-470B

- Compare attributes of length and weight by observation or when given actual measurements.

432-433, 434A-434B

Subskill D.b.: Direct measurement***Descriptors, such as but not limited to***

- Read and interpret measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter or 1/2-inch.

383-386B, 387-390B, 396-398B

- Read thermometers to the nearest 5 degrees F/C.

367-370B

- Tell time to the nearest minute using analog and digital clocks; translate time from analog to digital clocks and vice versa.

451-454B, 455-458B

- Investigate measurements of area.

403A-406B, 407-410B

Subskill D.c.: Indirect measurement***Descriptors, such as but not limited to***

- Apply estimation techniques using non-standard units.

383-386B, 387-390B, 415-418B, 419-422B, 431-434B

Objective E: Statistics and Probability**Subskill E.a.: Data analysis and statistics*****Descriptors, such as but not limited to***

- Answer and pose questions about collecting, organizing and displaying data. Work with data in the context of real-world situations by determining what data to collect and when and how to collect it to answer questions.

479-482, 482B, 483-486, 486B, 487-490, 490B

- Collect, organize and display data in simple bar graphs and charts including translating data from one form to the other.

479-482, 482B, 483-486, 486B, 487-490, 490B

- Draw reasonable conclusions based on simple interpretations of data.

479-482, 482B, 483-486, 486B, 487-490, 490B

- Read, use information and draw reasonable conclusions from data in graphs, tables, charts and Venn diagrams.

479-482, 482B, 483-486, 486B, 487-490, 490B

Subskill E.b.: Probability

Descriptors, such as but not limited to

- Determine if the occurrence of future events are more, less or equally likely to occur.

495A-498B

- Choose a fair and an unfair spinner.

497-498B, 499

Objective F: Algebraic Relationships

Subskill F.a.: Patterns, relations and functions

Descriptors, such as but not limited to

- Recognize, extend, describe, create and replicate a variety of patterns including attribute, number and geometric patterns.

Such as:

- Picture patterns
- Patterns in tables and charts
- “What’s-my-rule?” patterns
- Patterns using addition and subtraction rules.

127-130B, 187-190B, 357, 512, 527-530B, 543-546B, 590, 635-638B

- Focusing on relationships within patterns as well as extending patterns e.g., patterns and relationships represented with pictures, tables and charts, and “what’s-my-rule?” patterns using addition and subtraction rules.

127-130B, 187-190B, 357, 512, 527-530B, 543-546B, 590, 635-638B

- Determine odd or even with a total set of 20 or less.

131-134B

Subskill F.b.: Expressions, equations and inequalities

Descriptors, such as but not limited to

- Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.

3-6B, 11-14B, 27-30B, 115-117, 118B

- Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).

27-30B, 63-66B, 243-245B, 611-614B

Subskill F.c.: Properties***Descriptors, such as but not limited to***

- Use properties and or relationships of arithmetical thinking to determine and to reason about what number goes in a “box” to make a number sentence true,
 - identity property of e.g., zero Ex: property $12 + 0 = \text{“box”}$
adding 1 to any number, commutative property for addition of single-digits

35-38B, 47-50B, 71-74B

- Use simple equations in a variety of ways to demonstrate the properties above.

35-38B, 47-50B, 71-74B

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 4
Grade Three**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

• **Use reasoning and logic to:**

- **Perceive patterns**
- **Identify relationships**
- **Formulate questions**
- **Pose problems**
- **Make conjectures**
- **Justify strategies**
- **Test reasonableness of results**

12-14, 23, 24B, 24-25, 25B, 44-46, 48-49, 54-55, 56-57, 58B, 58-59, 59B, 70, 74-76, 78-79, 89, 98B, 98-101, 101B, 118B, 118-121, 121B, 132-133B, 153, 154B, 154-157, 157B, 174B, 174-177, 177B, 196B, 196-199, 199B, 214, 224B, 224-227, 227B, 252B, 252-253B, 268B, 268-269, 269B, 285, 292, 298B, 298-299, 299B, 316B, 316-317B, 342B, 342-343, 343B, 360B, 360-361, 361B, 374B, 374-375, 375B, 384B, 384-385, 385B, 403, 404B, 404-405, 405B, 415, 426B, 426-427, 429B, 448B, 448-449, 451B, 473, 482B, 482-483, 483B

• **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

24B, 24-25, 25B, 58B, 58-59, 59B, 98B, 98-101, 101B, 118B, 118-121, 121B, 132-133B, 154B, 154-157, 157B, 174B, 174-177, 177B, 196B, 196-199, 199B, 224B, 224-227, 227B, 252B, 252-253B, 268B, 268-269, 269B, 298B, 298-299, 299B, 316B, 316-317B, 342B, 342-343, 343B, 360B, 360-361, 361B, 374B, 374-375, 375B, 384B, 384-385, 385B, 404B, 404-405, 405B, 426B, 426-427, 429B, 448B, 448-449, 451B, 482B, 482-483, 483B

• **Connect mathematics to the real world, as well as within mathematics.4-5, 6-7, 8-9,**
12-14, 16-17, 18-21, 25, 32-33, 35, 37, 47, 77, 113, 169, 215, 313, 458-459, 463, 464-465, 466B, 466-467, 482-483

• **Create and use representations to organize, record, and communicate mathematical ideas.**

24B, 24-25, 25B, 58B, 58-59, 59B, 98B, 98-101, 101B, 118B, 118-121, 121B, 132-133B, 154B, 154-157, 157B, 174B, 174-177, 177B, 196B, 196-199, 199B, 224B, 224-227, 227B, 252B, 252-253B, 268B, 268-269, 269B, 298B, 298-299, 299B, 316B, 316-317B, 342B, 342-343, 343B, 360B, 360-361, 361B, 374B, 374-375, 375B, 384B, 384-385, 385B, 404B, 404-405, 405B, 426B, 426-427, 429B, 448B, 448-449, 451B, 482B, 482-483, 483B

- **Solve and analyze routine and non-routine problems.**

Representative pages: 98-101, 118-121, 154-157, 252B, 298-299, 299B, 316B, 316-317B, 384-385, 448-449

Objective B: Number Operations and Relationships

Subskill B.a.: Concepts

Descriptors, such as but not limited to

- **Recognize and apply place-value concepts to whole numbers less than 10,000.**
2A-2E, 3, 4A-5B, 6-7B, 8B-9B, 10A, 11A-11B

- **Read, write, and represent numbers using words, numerals, pictures (e.g. base ten blocks), number lines, , arrays, expanded forms ($243=200+40+3$) and symbolic renaming e.g., $243=250-7$.**

2A-2E, 3, 4A-5B, 6-7B, 8B-9B, 10A, 11A-11B, 110A-113B, 308B-311B

- **Compare and order whole numbers less than 10,000**
12B-14, 15A-15B, 16B-17B

- **Count by 2s, 3s, 5s, 10s, 25s and 100s starting with any multiple and 100s starting with any number.**

- **Identify and name counting patterns**

34-35, 68-70, 208B-209B, 210A-211B, 212A-215B

- **Count, compare and make change up to \$10.00 using a collection of coins and one-dollar bills.**

18B-21B, 22B-23B

- **Identify a fractional part of a collection/set or parts of a whole.**

274A, 274C-274D, 276A-277B, 278A-279B, 280A-281B

- **Read, write, order and represent unit fractions (e.g., $1/2$, $1/3$, $1/4$) and part(s) of a set.**

274A, 274C-274D, 276A-277B, 278A-279B, 280A-281B

Subskill B.b.: Computation

Descriptors, such as but not limited to

- **Use addition and subtraction in everyday situations and solve one-and two-step word problems**

31, 33, 35, 49, 51-52, 54-55, 57, 66-67, 70, 73, 76, 85, 87, 89, 90-91, 97, 98-99, 312-314, 316-318, 369

- **Solve double-and triple-digit addition and subtraction problems with regrouping in horizontal and vertical format in problems with and without context.**

48B-49B, 50A-53B, 54A-55B, 86A-87B, 88A-89B, 90A-91B, 92A-94, 95A-95B

- **Demonstrate understanding of multiplication as grouping or repeated addition or arrays in problems with and without context (without context up to 5×9 ; in context products up to 100).**

106A-106F, 107, 108A-109B, 110A-113B

- **Demonstrate understanding of the concept of division as repeated subtraction, partitioning/sharing or measuring (dividend up to 45 and divisors up to 5).**
162A-162D, 162F, 164A-165B, 170A-171B
- **Use fractions to represent quantities when solving problems involving equal sharing or partitioning including fractions less than one as well as mixed numbers.**
276A-277B
- **Represent with shaded circles, rods, squares or pictorial representations of objects (for a set).**
280B281, 281B
- **Estimate sums to tens, hundreds and thousands and differences of ten and hundreds.**
44A-47B, 48, 54, 56, 59, 74A-77B, 79, 146, 207, 221, 223, 267, 283, 307, 354, 394, 445
- **Determine reasonableness of answers.**
78B, 78-79, 196-198, 214, 252-253, 403, 426-428, 415, 473

Objective C: Geometry

Subskill C.a.: Describe figures

Descriptors, such as but not limited to;

- **Identify, describe, and compare properties of 2 and 3 dimensional figures such as squares, triangles, rectangles, pentagon, hexagon, octagon, pattern block shapes, circles, cubes, pyramids, rectangular prisms, tetrahedrons, cylinders, and spheres (e.g., comparing sides, faces, corners, and edges).**
232A-232C, 234B-23B7, 238A-240, 241A-241B, 246A-247B, 248A-249B, 250A-251B

Subskill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Create and identify 2-dimensional geometric shapes by combining or decomposing other shapes.**
268A-269B
- **Identify cubes and square pyramid shapes from their nets (flat patterns).**
241
- **Apply concepts of single-motion geometry (e.g., slides, flips and turns) to match two identical shapes.**
258A-258E, 260A-263B

Subskill C.c.: Coordinate Systems

Descriptors, such as but not limited to

- **Use simple 2-dimensional coordinate systems to find locations on maps and to represent points and simple figures with coordinates using letters and numbers, (e.g., (E, 3)).**
468A-471B

- Identify and use relationships among figures (e.g., location, position and intersection).

468A-471B

Objective D: Measurement

Subskill D.a.: Measurable attributes

Descriptors, such as but not limited to

- Describe attributes of length, time, temperature, liquid capacity, weight/mass, volume and identify appropriate units to measure them. Units include: inches, feet, yards, miles, meters, centimeters, millimeters, cups quarts, gallons, liters, seconds, minutes, hours, days, months, years, ounces, pounds, grams and degrees Fahrenheit/Celsius.

328A-331B, 334A, 335-336, 338A, 340A, 350A, 352A, 356A, 358A, 392A-395B, 402A-403B

- Compare attributes of length, volume and weight by observation or when given actual measurements.

334-335, 338-339, 339B, 340, 341B, 350B, 352B, 356B, 358B

- Make measurement conversions within a system (e.g., yards to feet; feet to inches; hours to minutes; days to hours; years to months; gallons to quarts).

334B-337B, 339, 340B-341B, 350A, 350, 352, 356, 358, 398

Subskill D.b.: Direct measurement

Descriptors, such as but not limited to

- Read and interpret and use measuring instruments to determine the measurement of objects with non-standard and standard units to the nearest centimeter, 1/4-inch.

332A-333B, 350-351, 351B

- Read thermometers to the nearest 5 degrees F/C.

402A-403B

- Tell time to the nearest minute and translate time from analog to digital clocks and vice versa.

396A-397B

- Determine and compare elapsed time in multiples of 15 minutes in problem-solving situations.

400A-401B

- Investigate measurements of area and perimeter.

366A-366E, 368A-369B, 370A-371B, 372A-373B, 376A-377B, 378A-379B

Subskill D.c.: Indirect measurement

Descriptors, such as but not limited to

- Apply estimation techniques using non-standard units.

326D, 376B, 378A-379B

Objective E: Statistics and Probability**Subskill E.a.: Data analysis and statistics****Descriptors, such as but not limited to**

- Answer and pose questions about collecting, organizing and displaying data. Work with data in the context of real-world situations by formulating questions that lead to data collection and analysis and determining what data to collect and when and how to collect the data.

456A, 458B, 458-459, 460-461, 466-467, 482-483

- Collect, organize and display data in simple bar graphs and charts, including translating data from one form to the other.

456A, 458B, 458-459B, 460-463B, 466-467, 482-483

- Draw reasonable conclusions based on simple interpretations of data.

121, 458-459B, 460-463B, 464B-465B, 482-483

- Read, use information and draw reasonable conclusions from data in graphs, tables, charts and Venn diagrams.

121, 458-459, 460-461, 464-465, 482A-483B

Subskill E.b.: Probability**Descriptors, such as but not limited to**

- Determine if the occurrence of future events are more, less or equally likely to occur.

456B, 472A-475B, 476A-477B, 478A-481B

- Design a fair and an unfair spinner.

472-475B

- Predict the outcomes of a simple event using words to describe probability.

Ex: Flipping a coin has a 1 out of 2 chance of getting a head.

476A-477B, 478A-481B

- Describe and determine the number of combinations for choosing 2 out of 3 items.

Ex: Red hat, blue jacket and green jacket. What are the combinations of wearing a hat and a jacket?

This concept is introduced in Grade 4: 466B, 466D, 468A-469B, 470A-471B

Objective F: Algebraic Relationships**Subskill F.a.: Patterns, relations and functions****Descriptors, such as but not limited to**

- Recognize, extend, describe, create and replicate a variety of patterns including attribute, number and geometric patterns.

Such as:

- Picture patterns
- Patterns in tables and charts
- “What’s-my-rule?” patterns
- Patterns using addition and subtraction rules.

206-207, 208B, 208-209, 210B, 210-211, 212B, 212-213, 218A-218B, 218-219

- Focusing on relationships within patterns as well as extending patterns e.g., patterns and relationships represented with pictures, tables and charts; “what’s-my-rule?” patterns using addition and subtraction rules.

206-207, 208B, 208-209, 210B, 210-211, 212B, 212-213, 218A-218B, 218-219

- Determine odd or even.

122

Subskill F.b.: Expressions, equations and inequalities

Descriptors, such as but not limited to

- Demonstrate an understanding that the “=” sign means “the same as” by solving open or true/false number sentences.

13, 35, 43, 124, 222A-223B, 291, 424

- Use notation to represent mathematical thinking: letter or box (variable); operation symbols (+, -, =).

13, 35, 43, 89, 98-99, 124, 196-198, 316-318, 222A-223B, 291, 424, 426-428

- Demonstrate a basic understanding of equality and inequality using symbols (<, >, =) with simple addition and subtraction.

34A, 35, 43, 124

Subskill F.c.: Properties

Descriptors, such as but not limited to

- Use properties and relationships of arithmetic to determine what number goes in a “box” to make a number sentence true,

- Identity property of zero Ex: $12 + 0 =$ “box”
- Identity property of one Ex: $5 \times 1 =$ “box”
- Commutative property for addition of single-digits
- Associative property

32A-33B, 95, 130A-131B

- Use simple equations in a variety of ways to demonstrate the properties above.

32A-33B, 95, 130A-131B

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 5
Grade Four**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

- **Use reasoning and logic to:**
 - **Perceive patterns**
 - **Identify relationships**
 - **Formulate questions**
 - **Pose problems**
 - **Make conjectures**
 - **Justify strategies**
 - **Test reasonableness of results**

58-59, 102-104, 128-129, 130-131, 132-3, 134A-135B, 238A-241B, 273, 402-403, 420-422

- **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

20B, 20-21, 34B, 34-35, 35B, 44B, 44-45, 47B, 68B, 68- 69B, 86B, 86-87, 89B, 116B, 116-117, 119B, 134B, 134-135, 135B, 208B, 208-209, 209B, 258B, 258-261, 261B, 282B, 282-283, 283B, 336B, 336-337, 339B, 356B, 356-357, 357B, 420B, 420-421, 423B, 460B, 460-461, 461B

- **Connect mathematics to the real world, as well as within mathematics.**

16-19, 28-33, 36-43, 57, 80-81, 84-85, 219, 233, 238-240, 268-272, 279, 293, 323, 373

- **Create and use representations to organize, record, and communicate mathematical ideas.**

20B, 20-21, 34-35, 44B, 44-46, 68-69, 86B, 86-88, 116-118, 134B, 134-135, 146-148, 258-259, 282-283, 402-403, 460-461, 476-477

- **Solve and analyze routine and non-routine problems.**

Representative pages: 34-35, 44-45, 86-87, 116-117, 208-209, 258-261, 336-337, 356-357
420-421, 460-461

Objective B: Number Operations and Relationships

Subskill B.a.: Concepts

Descriptors, such as but not limited to

- **Recognize and apply place-value concepts to whole numbers less than 1,000,000**
2A-2D, 3, 4A-6, 7A-7B, 8A-9B

- **Read, write, and represent numbers using words, numerals, pictures (e.g., base ten blocks), number lines, , arrays, expanded forms ($243=200+40+3$) and symbolic renaming e.g., $243=250-7$.**
2A-2D, 3, 4A-6, 7A-7B, 8A-9B
- **Compare and order numbers less than 10,000 represented in numbers, arrays, symbols ($<$, $>$, $=$) and words.**
10A-13B, 236A-237B, 270A-272, 273A-273B
- **Use basic facts to determine the first ten multiples of 2-10 and determine factors for numbers up to 100.**
52A-52D, 54A-56, 57A-57B, 58A-59B, 62A-63B, 64A-65B, 66A-67B, 84A-85B, 182A-183B
- **Recognize the divisibility potential of numbers (divisors of 2, 5, 10, 25)**
182A-183, 227
- **Count using whole numbers less than 10,000 and by any number 1-12 and ‘friendly numbers’ through 100. (ex. 20, 25, etc.)**
4A-6, 7A-7B, 8A-9B
- **Read, write, represent, count, compare and order, and make change using a collection of coins and bills equal to and less than \$20.00.**
2B, 16A-17B, 18A-19B
- **Read, write and identify, equivalent fractions ($\frac{1}{4}$ s, $\frac{1}{2}$ s, $\frac{1}{8}$ s, $\frac{1}{10}$ s, $\frac{1}{16}$ s)**
224A-226, 227A-227B, 228A-229B, 241
- **Represent fractions ($\frac{1}{4}$ s, $\frac{1}{2}$ s, $\frac{1}{8}$ s, $\frac{1}{10}$ s, $\frac{1}{16}$ s) using numbers, pictures (e.g. drawings or base ten blocks), and number lines.**
216B-218, 219A-219B
- **Order and compare fractions ($\frac{1}{4}$ s, $\frac{1}{2}$ s, $\frac{1}{8}$ s, $\frac{1}{10}$ s, $\frac{1}{16}$ s) represented numerically or as models (including parts of a set and parts of a whole)**
233, 234A-235B, 236A-237B
- **Rename improper fractions to mixed numbers.**
230A-232, 233A-233B

Subskill B.b.: Computation**Descriptors, such as but not limited to**

- **Use all operations in everyday situations to solve single or multi-step word problems.**

Representative pages: 16-19, 28-33, 39, 44-45, 57, 68-69, 88-89, 116-118, 238-240, 268-272

- **Solve three-and four-digit addition and subtraction with regrouping; multiplication of two-digit by one-digit numbers; division with single-digit divisors and two-digit dividends and with two-step or mixed operation problems with single-digit numbers.**
28-31B, 36A-38, 39A-39B, 40A-41B, 42a-43B, 110A-112, 113A-113B, 174A-176, 177A-177B, 186A-187B
- **Add and subtract decimals in the context of money.**
295, 295B, 296A-297, 299B
- **Solve problems using basic multiplication and division facts.**
58A-59B, 60A-61B, 62A-63B, 64A-65B, 80A-81B, 82A-83B, 84A-85B
- **Add and subtract fractions with like denominators.**
248A-248B, 250A-253B
- **Estimate: multiplication of two-digit by one-digit problems, addition and subtraction of decimals using money, and division in context**
100A-101B, 294A-295B, 166A-167B
- **Determine reasonableness of answers.**
102A-104, 105A-105B

Objective C: Geometry

Subskill C.a.: Describe figures

Descriptors, such as but not limited to

- **Identify, describe and compare properties of 2-and 3-dimensional figures, comparing sides, faces, vertices and edges of regular figures including parallel and perpendicular lines and line segments.**
196A-197B, 198B, 198-199, 200B, 202A-203B, 204A-205B, 206A-207B, 334A, 346A- 349B, 350A-351B, 352A-353B
- **Determine the number of faces, edges and vertices given an illustration of a 3-dimensional figure.**
346A- 349B

Subskill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Use pattern blocks and dot paper (geoboards) to describe, model and construct plane figures.**
194D
- **Identify cubes, rectangular and triangular prisms and rectangular and triangular pyramids from simple nets (flat patterns).**
350A-351B
- **Use slides, flips and turns on figures. Identify congruent shapes using figures that have been manipulated by one or two motions (slides, flips and turns).**
446A-446E, 448A-449B, 450A-451B, 452A-453B, 454A-455B

- **Discern a shape with one line of symmetry.**
456A-457B
- **Identify and describe 3-dimensional figures from multiple perspectives.**
352A-353B

Subskill C.c.: Coordinate systems***Descriptors, such as but not limited to***

- **Use simple 2-dimensional coordinate systems to identify or plot locations on maps and to represent points and simple figures with coordinates using letters and numbers, (e.g., (E, 3)).**
408A-409B
- **Identify and use relationships among figures (e.g., location, position and intersection).**
408A-409B

Objective D: Measurement**Subskill D.a.: Measurable attributes*****Descriptors, such as but not limited to***

- **Identify appropriate units to measure length, liquid capacity, volume, weight/mass, time, temperature. Units include: inches, feet, yards, miles, millimeters, centimeters, meters, kilometers, ounces, cups quarts, gallons, liters, seconds, minutes, hours, days, months, years, ounces, pounds, grams, kilograms and degrees Fahrenheit/Celsius.**
364A-365B, 366B-367B, 368A-369B, 374A-375B, 376A-377B, 378A-379B, 384A-385B, 390A-391B
- **Compare attributes of length and weight by direct observation or when given actual measurements.**
364, 368B, 368, 374A-374, 378A-379B
- **Make measurement conversions within a system between units (e.g., feet and yards; inches and feet; quarts and gallons; meters and centimeters; minutes and hours; hours and days; months and years).**
370A-373B, 380A-383B, 384A-385B

Subskill D.b.: Direct measurement***Descriptors, such as but not limited to***

- **Read, interpret and use measuring instruments to determine the measurement of objects with non- standard and standard units to the nearest $\frac{1}{4}$ - inch or centimeter.**
364A-365B, 374A-375B
- **Read thermometers to the nearest five degrees F/C and read a scale to the nearest ounce or five grams.**
368B, 378-379, 390A-391B
- **Translate time on an analog clock to a digital clock and vice versa.**
386A-389A

- **Determine and compare elapsed time in problem-solving situations.**

386A-389A

Subskill D.c.: Indirect Measurement

Descriptors, such as but not limited to

- **Estimate measurement using U.S customary and metric measurements.**
364A-365B, 366B-367B, 368A-369B, 374A-375B, 376A-377B, 378A-379B, 384A-385B, 390A-391B

- **Determine perimeter and area of regular shapes and the area of plane rectangular shapes.**

314A-314D, 316A-317B, 318A-319B, 324A-325B, 326A-327B, 328A-330, 331A-331B

- **Determine perimeter and area of irregular shapes when given a reference tool such as a grid.**

315, 320A-322, 323A-323B

Objective E: Statistics and Probability

Subskill E.a.: Data analysis and statistics

Descriptors, such as but not limited to

- **Formulate questions to collect, organize and display data.**

402A-403B

- **Collect, organize and display data in appropriate graphs or charts.**

402A-403B, 420A-423B

- **Draw reasonable conclusions based on contextual data.**

404A-405B,

- **Use data to predict outcomes or trends from graph or table.**

402A-403B, 404A-405B, 406A-407B, 410A-411B

- **Read and interpret information from single bar graphs, line plots, picture graphs and Venn diagrams.**

404A-405B, 406A-407B, 410A-411B

- **Describe a given set of data of seven items/numbers or fewer using the terms range, mode and median in problems with and without context.**

412A-413B, 414A-415B

Subskill E.b.: Probability

Descriptors, such as but not limited to

- **Determine if future events are more, less or equally likely, impossible or certain to occur.**

472A, 472

- **Choose or design an event that is fair or unfair.**
472A, 472, 474
- **Predict the outcomes of a simple event using words to describe probability and test predictions using data from a variety of sources.**
472A-473B
- **Describe and determine the number of combinations for choosing 2 out of 4 items**
Ex: What are the possible combinations when selecting 2 items from a menu of 4 items (chips, cookie, pizza, banana, etc.)?
468A-469

Objective F: Algebraic Relationships

Subskill F.a.: Patterns, relations and functions

Descriptors, such as but not limited to

- **Recognize, extend, describe, create and replicate a variety of patterns including attribute, numeric and geometric patterns.**
128B, 128-129, 130-131, 132-133, 237, 240, 356B, 356-357, 437
- **Represent patterns and relationships with pictures, tables and charts.**
126B-126D, 127, 128B-129, 129B, 130A-131, 131B, 132A-133, 134A-135, 135B
- **Describe a rule that explains a functional relationship or pattern using addition, subtraction or multiplication rules.**
128B, 128-129, 130B, 130-131, 132B, 132-133
- **Determine a future event in a pattern up to the eighth item when given the first five.**
128B, 128-129, 130-131, 132-133, 237, 240, 356B, 356-357, 437

Subskill F.b.: Expressions, equations and inequalities

Descriptors, such as but not limited to

- **Solve simple one-step open sentences involving all operations in context.**
31, 44A-46, 47B, 79, 303, 434-435B, 436A-437B
- **Demonstrate a basic understanding of equality and inequality using symbols ($<$, $>$, $=$) with all operations.**
432A-433B
- **Solve simple one-step open sentences including missing factor in problems with and without context e.g., “box” or letter variable and whole number coefficients.**
31, 44A-46, 47B, 79, 303, 434-435B, 436A-437B
- **Represent problem situations with one-step equations involving multiplication and division with simple open sentences.**
68B-69B, 86B-87, 89B, 116B-118, 119B

- **Represent problem situations with one-step equations or expressions using one of the four operations.**

44B-45, 46B, 68B-69B, 86B-87, 89B, 116B-118, 119B

Subskill F.c.: Properties

Descriptors, such as but not limited to

- **Use the commutative property of multiplication with positive single digits.**

60A-61B

- **Use the inverse relationship of division and multiplication with single digit, whole numbers.**

80-81

Demonstrate understanding of order of operations by solving two-step open sentences involving all operations.

186-187, 279

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 6
Grade Five**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

- **Use reasoning and logic to:**
 - **Perceive patterns**
 - **Identify relationships**
 - **Formulate questions**
 - **Pose problems**
 - **Make conjectures**
 - **Justify strategies**
 - **Test reasonableness of results**

14-15, 33, 88-89, 209, 212-213, 270-271, 382-383, 404-405

- **Communicate mathematical ideas and reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

14B, 14-16, 34A-37B, 74A-77B, 110A-113B, 162A-163B, 188B, 188-190, 270B, 270-271, 288B, 288-289, 341B, 314-315, 340B, 340-341, 366B, 366-367, 386A-389B, 404B, 404-405, 422B, 422-423, 454A-455B, 478A-478B, 494A-495B

- **Connect mathematics to the real world, as well as within mathematics.**

Most Mixed Problem Solving lessons make real world connections: 9, 27, 34-35, 41, 161, 237, 361

- **Create and use representations to organize, record, and communicate mathematical ideas.**

34B, 34-36, 74B, 74-76, 110B, 110-112, 138B, 138-139, 246B, 246-247, 288B, 288-289, 386B, 386-387

- **Solve and analyze routine and non-routine problems.**

Representative pages: 14-15, 46-48, 74-75, 110-111, 162-163, 270-271, 314-315, 340-31, 386-387, 494-495

Objective B: Number Operations and Relationships

Subskill B.a.: Concepts

Descriptors, such as but not limited to

- **Recognize and apply place-value concepts to whole numbers less than 10,000,000**
2A-2D, 3, 4A-5B

- **Read, write, and represent numbers using words, numerals, pictures (e.g., base ten blocks), number lines, , arrays, expanded forms ($12,436=10,000+2000+400+30+6$) and symbolic renaming e.g., $12,436=12,450-14$.**

2A-2D, 3, 4A-5B

- **Compare and order numbers less than 100,000 represented in numbers, arrays, symbols ($<$, $>$, $=$) and words.**

6A-9B, 12A-13B

- **Identify and use number theory concepts:**

- **prime and composite numbers**
- **divisibility potential of numbers (divisors of 1-10, 25).**
- **least common multiples through 24**
- **greatest common factors through 50**

102A-105B, 106A-109B, 232A-233B, 260A-261B

- **Read, write and identify monetary amounts represented with visual models.**

42-43, 44-45, 46A-47, 49A-49B, 170B-171B, 172A, 172-173B, 174B-175, 176A-177B, 179-179A, 187, 195, 197

- **Compare and order monetary amounts.**

Related content: 244B-245B

- **Equate a monetary value with its benchmark fraction and percent. (Eg. $\$.25=1/4=25\%$)**

218D-218E

- **Demonstrate basic understanding of proportionality in proportional contexts.**

This concept is introduced in Grade 6: 302-303

- **Read, write, identify, order, compare and mixed fractions.**

226A-227B

- **Represent fractions using numbers, pictures, and number lines.**

218A-218B, 218E, 220B-222, 223A-223B, 224A-225, 225B, 226B-227, 227B, 229B, 231B, 234B-234

- **Rename improper fractions to mixed numbers in lowest terms.**

226A-227B

- **Identify and represent equivalence between fractions, percents, and decimals.**

238A-241B, 242A-243B, 244A-245B

Subskill B.b.: Computation

Descriptors, such as but not limited to

- **Use all operations in everyday situations to solve single or multi-step word problems.**

Representative pages: 25-26, 27A-27B, 29, 32, 33B, 34A-36, 37A-37B, 40, 43, 43A-43B

- **Solve three-and four-digit addition and subtraction with regrouping; multiplication of three-digit by two-digit numbers; division with single-digit divisors and four-digit dividends and with two-step or mixed operation problems.**

24-27, 38-41, 68-71, 84-85, 86-87, 88-89, 94-96, 98-100, 113, 122-123, 124-125, 126-127, 128-129, 130-131, 134-135

- **Compute with decimals in the context of money and make change.**

43-44, 43B, 44-45A, 170-171, 171B, 173-173B, 174B-175, 175B, 177, 177B, 179-179A, 180B-182, 185, 186B-187B

- **Solve problems using basic multiplication and division facts.**

57-59, 116, 122-123

- **Rename improper fractions.**

226A-227B

- **Add and subtract fractions with unlike denominators (halves, thirds, fourths, fifths, and tenths) with sums or differences between 0 and 1.**

256-258B

- **Estimate using basic whole number operations, benchmark fractions and benchmark decimals.**

30-32, 33A-33B, 37, 52, 60-61, 62-63B, 64-66, 124-125, 170, 174-175, 184-185, 287

- **Determine reasonableness of answers.**

42, 44, 46, 68

Objective C: Geometry

Subskill C.a.: Describe figures

Descriptors, such as but not limited to

- **Recognize and name polygons with 3, 4, 5, 6 or 8 sides.**

198B, 198D-198E, 206B-207B, 208B, 209B, 210A, 211B

- **Identify lines and line segments in a plane figure.**

198E, 200B-202, 203A-203B, 204-205

- **Classify plane figures by characteristics of angles (acute, obtuse and right) and describe rays found in open-angle situations.**

200-202, 204A-205B, 208A-209B, 210-211A

Subskill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Use tangrams to describe, model, and construct plane figures.**

477

- **Identify figures that are congruent and/or similar.**

472B-473B, 474A, 476, 477A-477B

- Describe and compare cubes, rectangular and triangular prisms and rectangular and triangular pyramids from nets (flat patterns).

326A-327B

- Use slides, flips and turns on figures. Identify congruent shapes using figures that have been manipulated by one or two motions (slides, flips and turns).

426A-462E, 464A-467B, 468A-469B, 470A-471B, 472-473B

- Identify lines of symmetry and the number of lines of symmetry in figures and design shapes that have at least one line of symmetry.

474A-476, 477B

- Identify and describe 3-dimensional figures from multiple perspectives.

330A-331B

Subskill C.c.: Coordinate systems

Descriptors, such as but not limited to

Identify and plot the coordinates of locations or objects on simple one quadrant grids using numbers only.

420A-421B, 422A

- Locate the fourth coordinate pair when given three vertices of a rectangle or parallelogram on a coordinate grid.

416

Objective D: Measurement

Subskill D.a.: Measurable attributes

Descriptors, such as but not limited to

- Identify appropriate units to measure length, liquid capacity, volume, time, weight/mass, temperature, including mixed measures. Units include: inches, feet, yards,(i.e. 1 foot 3 inches) miles, centimeters, millimeters, meters, kilometers, ounces, cups quarts, gallons, liters, hours, minutes, seconds (i.e. 1 hour 15 minutes) , days, months, years, ounces, pounds, grams, kilograms and degrees Fahrenheit/Celsius.

296A- 297B, 298A-299B, 300A-303B, 332A-333, 335A-335B, 346A-346E, 347, 348A-349B, 350A-351B, 352A-353B, 358A-361B, 362A-363B, 364A-365B

- Compare attributes of length and weight by observation or when given actual measurements.

298-299

- Make measurement conversions within a system between units (e.g., feet and yards; inches and yards; quarts and gallons; meters and centimeters; seconds and hours).

354A-355B, 356A-357B

Subskill D.b.: Direct measurement***Descriptors, such as but not limited to***

- **Measure down to the nearest $\frac{1}{8}$ -inch, centimeter or millimeter.**
296B-297B, 298-299B
- **Determine angle measurement to nearest five degrees using a protractor.**
204-205B
- **Read and interpret measuring instruments to determine the measurement of objects with standard units (U.S. customary).**
296B-297B348-349B
- **Determine and compare elapsed time in problem-solving situations.**
358A-360, 361A-361B

Subskill D.c.: Indirect Measurement***Descriptors, such as but not limited to***

- **Estimate measurement using U.S customary and metric measurements.**
296, 348, 350, 352
- **Determine the area of regular shapes including right triangles.**
304A-305B, 306A-307B, 308A-309B
- **Determine distance between points using a scale.**
418A-419B

Objective E: Statistics and Probability**Subskill E.a.: Data analysis and statistics*****Descriptors, such as but no limited to***

- **Formulate questions to collect, organize and display data.**
430A-431B
- **Collect, organize and display data in appropriate graphs or charts.**
430A-431B, 432A-435B, 436A-439B, 440A-443B, 444A-445B, 446A-449B, 454A-455B
- **Draw reasonable conclusions based on contextual data.**
430A-431B, 432A-435B, 436A-439B, 440A-443B, 444A-445B, 446A-449B, 454A-455B
- **Use data to predict outcomes or trends from graphs and tables.**
436A-439B
- **Extract, interpret and analyze data from single bar graphs, tables and charts, line plots, context, circle graphs and Venn diagrams.**
430A-431B, 432A-435B, 436A-439B, 440A-443B, 444A-445B, 446A-449B, 454A-455B
- **Describe a given set of data of ten or fewer items/numbers using the terms mean, median, mode and range to extract information from organized charts, tables, graphs and Venn diagrams in problems with and without context.**
450-453

Subskill E.b.: Probability*Descriptors, such as but not limited to*

- Determine the likelihood of future events, predict outcomes of future events and test predictions using data from a variety of sources.

492A-493B

- Choose or design an event that is fair or unfair.

488-489

- Determine the probability of events in context using words, percents or fractions.

488A-491B

- Describe and determine the number of combinations of selecting 3 items from 4 or more items.

494A-495B

Objective F: Algebraic Relationships**Subskill F.a.: Patterns, relations and functions***Descriptors, such as but not limited to*

- Recognize, extend, describe, create and replicate a variety of patterns including attribute, numeric and geometric patterns.

33, 105, 133, 148-151B, 203, 382B-384B

- Represent patterns and relationships with pictures, table and charts.

105, 148-151B, 382B-384, 385B

- Describe a rule that explains a functional relationship or pattern using addition, subtraction or multiplication rules.

105, 149, 382-384

- Determine a future event in a pattern up to the tenth item when given the first five.

105, 133, 212-213, 382B-384B

- Solve simple two-step, two operation patterns. Ex: 5, 8, 6, 9, 7, 10, 8..... (Pattern: +3-2....)Represent patterns and relationships with pictures, table and charts.

33

Subskill F.b.: Expressions, equations and inequalities*Descriptors, such as but not limited to*

- Demonstrate basic understanding of equality and inequality using symbols ($<$, $>$, $=$) with multi-step, mixed operations.

259, 374C, 376A-377B, 389

- Solve one-step equations with “box” variable and whole number coefficients in problems with and without context using whole number coefficients.

376B-377B, 378A-379B

- **Solve two-step multi-operation equations with “box” or letter variable and whole number coefficients with and without context. Ex: $3 * \text{”box”} + 1 = 7$**

Related content: 158B-159, 161A-161B

- **Represent problem situations with one or two-step equations or expressions. Solve simple two-step, two operation patterns.**

376B-377B, 378A-379B, 380B-381B, 382B-384, 385A-385B, 386A-388, 389A-389B

- **Solve two-step open sentences involving all operations.**

158B-159, 161A-161B

- **Solve equations involving any two operations. Ex: $3 * 4 - 2 = ?$, Ex: $12/3, +1 = \text{”box”}$, Ex: $5 * 2 - 1 = a$**

158B-159, 161A-161B

Subskill F.c.: Properties

- **Use the commutative property of multiplication with positive single digits.**

58-59, 60, 223

- **Use the inverse relationship of division and multiplication with single whole digits.**

378-379B

- **Simplify (evaluate) two-step numerical expressions using correct order of operations.**

158B-159, 161A-161B

- **Demonstrate understanding of distributive property.**

156B-157B

- **Demonstrate understanding of order of operations by solving two-step open sentences involving all operations.**

158B-159, 161A-161B

**Scott Foresman – Addison Wesley enVisionMATH
to the Wisconsin WKCE-CRT
Assessment Framework for Mathematics
Beginning of Grade 7
Grade Six**

Objective A: Mathematical Processes

Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.

Descriptors, such as but not limited to

- **Use reasoning and logic to:**
 - Perceive patterns
 - Identify relationships
 - Formulate questions
 - Pose problems
 - Make conjectures
 - Justify strategies
 - Test reasonableness of results

87, 110-112, 214-215, 290B-291B, 328-329, 362B-363B, 376B-377B, 378B-379B, 390-391, 466-468

- **Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.**

14B, 14-16, 34A-37B, 74A-77B, 110A-113B, 162A-163B, 188B, 188-190, 270B, 270-271, 288B, 288-289, 341B, 314-315, 340B, 340-341, 366B, 366-367, 386A-389B, 404B, 404-405, 422B, 422-423, 454A-455B, 478A-478B, 494A-495B

- **Connect mathematics to the real world, as well as within mathematics.**

13, 21, 45, 73, 109, 123, 131, 153, 169, 277, 287, 305, 337, 347, 403, 407, 461

- **Create and use representations to organize, record, and communicate mathematical ideas.**

24A-25B, 50A-53B, 102A-105B, 110A-112, 113A-113B, 154A-155, 178A-179B, 290A-291B, 314A-315B, 322A-323B, 444A-446, 447A-447B, 466-468, 469A-469B, 488A-489B, 536A-537B

- **Solve and analyze routine and non-routine problems.**

Representative pages: 48-49, 50-52, 102-104, 194-195, 250-252, 290-291, 310-312, 372-373, 390-391, 536-537

Objective B: Number Operations and Relationships

Sub-skill B.a.: Concepts

Descriptors, such as but not limited to

- **Recognize and apply place-value concepts to numbers less than 10,000,000 with decimals to the thousandths place.**

2B, 4A-7B, 8A-9B, 10A-12, 13A-13B, 28

- **Read, write and represent numbers using words, numerals, number lines, arrays, and expanded form ($12.09=10+2+.09$) and symbolic renaming ($12.09= 13-.91$).**
2B-2C, 2F, 4A-7B, 10A-12, 13A-13B, 28
- **Compare and order a set of fractions or decimals (to the hundredths place) and use symbols ($<$, $>$, $=$, \neq , \leq , \geq).**
8A-9B, 28
- **Identify and use number theory concepts:**
 - prime and composite numbers
 - divisibility potential of numbers (divisors of 1-10, 25, and multiples of 10).
 - least common multiples
 - greatest common factor of two numbers120A-123B, 124A-125B, 126A-127B, 135, 150, 163, 164A-165B, 167, 299, 303, 519
- **Demonstrate understanding of fractions and benchmark percents in problems with context.e.g., Joe got six questions correct and two were wrong, what percent did he get correct?.**
128A-131B, 345-347
- **Apply proportional reasoning to a variety of problem situations. (E.g., comparisons and/or rates).**
322A-323B, 324A-325B, 326A-327B, 328A-329B
- **Identify equivalent forms of fractions, decimals and percents.**
348A-349B

Sub-skill B.b.: Computation

- **Use all operations in everyday situations (including monetary contexts) to solve single or multi-step word problems.**
Representative pages: 38, 44, 81, 103-104, 155, 179, 193, 209, 241, 360
- **Solve problems involving percents with and without context.**
342A-342E, 343, 344A-347B, 348A-349B, 350A-351B, 352A-353B, 354A357B358A-361B
- **Add and subtract decimals including thousandths with and without context.**
64A-65B
- **Multiply decimals including hundredths with and without context.**
66A-69B, 70A-72, 73A-73B,
- **Divide decimals including hundredths by single-digit divisors in problems with and without context.**
66A-69B, 74A-75B76A-77B, 78A-79B
- **Demonstrate understanding of the concept of division of fractions in a contextual setting.**
202A, 203, 203B, 205, 205B, 207, 207B, 209, 209B

- **Add, subtract, and multiply mixed numbers and fractions with like and unlike denominators.**
160A-160D, 162A-163B, 166A-169B, 172A-173B, 174A-177B, 184A-184C, 186A-187B, 190A-191B, 192A-193B, 194A-195B
- **Estimate the sum, difference and product of whole numbers, common fractions, mixed numbers and decimals to thousandths and estimate benchmark fractions.**
66A-68, 69A-69B, 170A-171B, 188A-189B, 208A-209B
- **Determine reasonableness of answers.**
48, 79, 102, 110, 174, 204, 324, 331, 362A-363B

Objective C: Geometry

Sub-skill C.a.: Describing figures

Descriptors, such as but not limited to

- **Name regular and irregular polygons up to eight sides and identify and justify by characteristics whether a shape is a polygon.**
274A-277B, 278A-281B
- **Determine the number of faces, edges and vertices given an illustration of a 3-dimensional figure.**
274B-277B, 278A-281B
- **Classify shapes according to characteristics such as parallel and perpendicular lines; identify right, acute and obtuse angles with varied orientations.**
262A-264, 265A-265B, 266A-269B, 270A-273B, 277
- **Find the measure of the third angle of a triangle when given the measures of two interior angles.**
274B-276, 277A-277B
- **Decompose convex polygons into triangles using diagonals from a single vertex.**
Related content: 277B, 278B, 290

Sub-skill C.b.: Spatial relationships and transformations

Descriptors, such as but not limited to

- **Draw and/or describe a similar figure when given a polygon drawn on graph paper with vertices at lattice points.**
284-285
- **Identify figures that are congruent and/or similar.**
284A-286, 287B, 330A-333B
- **Demonstrate understanding of similarity by finding the relationship between the sides of two figures.**
330A-333B

- **Draw or identify the image of a figure based on one or more transformations (reflection, rotation and/or translation).**

284A-286, 287A-287B

- **Design symmetrical shapes.**

288A-289B

- **Draw or identify lines of symmetry.**

288A-289B

- **Identify and describe 3-dimensional figures from multiple perspectives.**

454B-456, 457B

Sub-skill C.c.: Coordinate systems

Descriptors, such as but not limited to

- **Identify, locate, plot coordinates in the four quadrants and transformations of points across the x- or y-axis.**

246-249B

- **Locate or plot coordinates in the four quadrants using a geometric figure (e.g., transformations).**

249B

Objective D: Measurement

Sub-skill D.a.: Measurable attributes

Descriptors, such as but not limited to

- **Select the appropriate unit of measure to estimate the length, liquid capacity, volume, weight/mass of everyday objects using U.S. customary and metric.**

408-411

- **Convert units within a system e.g., feet to yards; ounces to pounds; inches to feet; pints to quarts.**

400A-403B, 404A-407B

- **Approximate conversions of units between metric and U.S. customary systems using a model or in context (quart/liter; yard/meter).**

412A-413B

Sub-skill D.b.: Direct measurement

Descriptors, such as but not limited to

- **Apply appropriate tools and techniques to measure down to the nearest $\frac{1}{4}$ -, $\frac{1}{8}$ - or $\frac{1}{16}$ -inch or nearest centimeter or millimeter.**

408A-410, 411B

- **Determine and compare elapsed time in problem-solving situations.**

414A-416, 417A-417B

- **Measure and/or draw angles up to 180 degrees.**

266A-269B

Sub-skill D.c.: Indirect measurement

Descriptors, such as but not limited to

- **Estimate area given a reference.**

433, 443B

- **Determine perimeter/circumference and area of squares, rectangles, triangles, parallelograms and circles in real-world context.**

426A-429B, 438A-441B

- **Determine the distance between points using a scale.**

334A-336, 337A-337B

Objective E: Statistics and Probability

Sub-skill E.a.: Data analysis and statistics

Descriptors, such as but not limited to

- **Summarize data sets in tables, charts and diagrams with and or without context.**

476B-478, 479A-479B, 480A-483B, 484A-487B, 488A-489B, 490A-493B, 494A-497B, 498A-499B, 500A-501B, 502A-505B

- **Evaluate a set of data to generate or confirm/deny hypotheses.**

476B-478, 479A-479B, 480A-483B, 484A-487B, 488A-489B, 490A-493B, 494A-497B, 498A-499B, 500A-501B

- **Extract, interpret and analyze data from tables, simple stem-and-leaf plots, simple bar graphs, line plots, line graphs, simple circle graphs, charts and diagrams.**

476B-478, 479A-479B, 480A-483B, 484A-487B, 488A-489B, 490A-493B, 498A-499B, 500A-501B, 502A-505B

- **Create graph with one-variable data sets using simple stem-and-leaf plots, bar graphs, circle graphs, line plots and line graphs; discuss appropriateness of graphs selected.**

476B-478, 479A-479B, 480A-483B, 484A-487B, 488A-489B, 494A-497B, 498A-499B

- **Find mean, median (with odd set of data), mode and range of a set of data with and without context.**

490A-493B

- **Evaluate sources of data in context and multiple representations of a given data set.**

484A-487B, 502A-505B

Sub-skill E.b.: Probability***Descriptors, such as but not limited to***

- **Determine the likelihood of an event and probability based on one independent event, e.g., spinning the arrow on a spinner.**

528A-529B

- **Use probabilities to estimate outcomes and evaluate fair and unfair simple events.**

528A-529B

- **Use data from simulations provided in charts/tables to solve and interpret probability problems.**

520-521, 523, 530B, 531, 533B, 536A-537B

- **Describe and determine the number of combinations of selecting 3 items from 4 or more items.**

524A-526, 527A-527B

- **Solve problems involving sample spaces or diagrams.**

520A, 520-522, 523A-523B

- **Analyze outcomes based on an understanding of theoretical and experimental probability.**

530A-533B

Objective F: Algebraic Relationships**Sub-skill F.a.: Patterns, relations and functions*****Descriptors, such as but not limited to***

- **Use two concurrent numeric patterns to describe and analyze functional relationships between two variables in two concurrent numeric patterns using addition and subtraction.**

376

- **Extend a given arithmetic sequence of pictures or numbers.**

48B-49B, 214-215B, 290B-291B, 376B-379B

- **Describe and interpret linear patterns in tables and graphs.**

48B-49B, 214-215B, 376B-379B, 378B-379B, 380A-381B, 382A-385B

- **Identify the rule to complete or extend a function table or any combination of the two using one operation (+, -, \times , \div) and numbers (0 through 100) in the function table.**

290B-291B, 376B-377B, 378B-379B

- **Describe real-world phenomena represented by a graph. Describe real-world phenomena that a given graph might represent.**

246, 248, 249

Sub-skill F.b.: Expressions, equations and inequalities**Descriptors, such as but not limited to**

- **Demonstrate understanding of equality and inequality and solve single-variable equations using symbols ($<$, $>$, $=$).**
13, 96-97B, 98A-101B, 102-105B, 106A-108, 109A-109B, 110A-113B, 372A-374, 375A-375B, 389
- **Solve single-variable one-step equations and algebraic expressions with one variable and one operation and whole number coefficients with and without context.**
13, 96-97B, 98A-101B, 102-105B, 106A-108, 109A-109B, 110A-113B, 372A-374, 375A-375B, 389
- **Describe in words the generalization for a given one-operation pattern.**
48A-49B
- **Solve two-step multi-operation equations with letter variables and whole number coefficients with and without context. Ex: $3x + 1 = 7$**
372A-374, 375A-375B, 378A-379B
- **Represent problem situations with one or two-step equations or expressions.**
102-103, 110-111, 315
- **Describe in words the generalization for a given one-operation pattern.**
49, 49B
- **Evaluate formulas with and without context by solving for a specified variable.**
310-313B, 426A-428, 429A-429B, 438A-440, 441A-441B, 442A-443B, 462A-463B, 464A-465B

Sub-skill F.c.: Properties**Descriptors, such as but not limited to**

- **Identify a pair of equivalent numerical expressions where the commutative property of either addition or multiplication has been used.**
34A-35B, 238-239
- **Demonstrate understanding of up to three-step order of operations expression with and without context using parentheses and exponents.**
36A-38, 39A-39B, 80-81B
- **Demonstrate understanding of distributive property.**
40A-41B, 192