

A Correlation of

SCOTT FORESMAN • ADDISON WESLEY

Mathematics

to the

Washington
Grade Level Content
Expectations
EALR's
Grades K-6



M/M-113

Introduction

This document demonstrates the high degree of success students will achieve when using **Scott Foresman – Addison Wesley Mathematics** in meeting the objectives of the Washington Grade Level Content Expectations—EALR's. 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.

Table of Contents

Kindergarten.....	1
Grade One.....	9
Grade Two.....	20
Grade Three.....	31
Grade Four.....	44
Grade Five.....	57
Grade Six.....	71

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s
Kindergarten**

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand the concept of number.

- **Count objects to at least 10 items using one-to-one correspondence.**
K: 53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104, 115A-115B, 115-116
- **Represent a number to at least 31 in different ways (e.g., words, numerals, pictures, physical models). [CU]**
K: 53A-53B, 53-54, 55A-55B, 55-56, 57A-57B, 57-58, 59A-59B, 59-60, 69A-69B, 69-70, 77A-77B, 77-78, 79A-79B, 79-80, 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 93A-93B, 93-94, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 109A-109B, 109-110, 111A-111B, 111-112
- **Recognize that the last count word names the quantity of the set (cardinality). [CU, MC]**
K: 53A-53B, 53-54, 57A-57B, 57-58, 77A-77B, 77-78, 79A-79B, 79-80, 83A-83B, 83-84, 103A-103B, 103-104
- **Identify the base ten digits 0-9.**
K: 55A-55B, 55-56, 59A-59B, 59-60, 61A-61B, 61-62, 81A-81B, 81-82, 85A-85B, 85-86

1.1.2 Understand sequential relationships among whole numbers.

- **Tell what number comes before or after a given number. [CU]**
K: 65A-65B, 65-66, 91A-91B, 91-92

- **Use comparative language (e.g., less than, more than, equal to) to compare numbers to at least 20. [CU]**
K: 63A-63B, 63-64, 87A-87B, 87088, 89A-89B, 89-90, 121A-121B, 121-122
- **Use a known quantity to at least 10 (benchmark) to compare sets (e.g., sets of counters).**
K: 63A-63B, 63-64, 87A-87B, 87088, 89A-89B, 89-90
- **Identify the ordinal position of objects at least through tenth. [SP, CU, RL, MC]**
K: 213A-213B, 213-214, 215A-215B, 215-216

Computation

1.1.5 Understand meaning of operations and how they relate to one another.

- **Express stories involving addition and subtraction (e.g., join, separate) with models, pictures, and symbols. [SP, CU, RL, MC]**
K: 225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 231A-231B, 231-232, 235A-235B, 235-236, 237A-237B, 237-238, 245A-245B, 245-246, 247A-247B, 247-248, 265A-265B, 265-266, 267A-267B, 267-268, 269A-269B, 269-270
- **Use addition in the classroom environment (e.g., boys and girls in attendance).**
K: 245-246, 247-248, 251-252, 253-254

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes, Units, and Tools

1.2.1 Understand and apply appropriate terminology to compare attributes.

- **Use comparative vocabulary to describe objects (e.g., longer/shorter, heavier/lighter, nearer/further, thicker/thinner, shorter/taller). [CU]**
K: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18
- **Use terms to describe the duration of events (e.g., long time or short time). [CU]**
K: 177A-177B, 177-178

1.2.3 Understand that objects can be used as tools for nonstandard measurement.

- **Use nonstandard units to measure (e.g., paper strips, cubes, beans).**
K: 139A-139B, 139-140, 141A-141B, 141-142, 147A-147B, 147-148, 151A-151B, 151-152

Component 1.3: Understand and apply concepts and procedures from geometric sense.
--

Properties and Relationships**1.3.1 Recall and understand characteristics of familiar 3-D objects.**

- **Describe objects based on characteristics (e.g., big, small, like a box).** [CU, MC]
K: 197A-197B, 197-198, 199A-199B, 199-200
- **Identify objects based on their characteristics.** [MC]
K: 197A-197B, 197-198, 199A-199B, 199-200, 201A-201B, 201-202

1.3.2 Understand how to sort and compare 3-D objects using characteristics.

- **Identify and sort 3-D objects in their environment by characteristics (e.g., cans, balls, boxes).** [MC,RL]
K: 197A-197B, 197-198, 199A-199B, 199-200
- **Compare 3-D objects using comparative language (e.g., bigger, taller, shorter, fatter).** [CU]
K: 199A-199B, 199-200

1.3.3 Understand the relative position of 3-D objects in their environment.

- **Describe the location of objects relative to each other (e.g., in, out, over, under, behind, above, below, next to, etc.).** [MC, CU]
K: 3A-3B, 3-4, 5A-5B, 5-6, 7A-7B, 7-8, 9A-9B, 9-10

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Statistics

1.4.3 Understand that data can be collected and organized.

- **Sort and classify data.**
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32, 33A-33B, 33-34
- **Use physical objects and/or pictures to build bar graphs.**
K: 33A-33B, 33-34
- **Answer questions about class-made graphs (e.g., How many cats? How many dogs?).**
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32

Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns and Relationships

1.5.1 Understand that objects are grouped by common attributes.

- **Sort objects by easily distinguishable attributes (e.g., color, size, shape).**
K: 27A-27B, 27-28, 29A-29B, 29-30, 31A-31B, 31-32
- **Describe and extend a repeating pattern (e.g., ABAB, green-green-blue). [CU, RL]**
K: 35A-35B, 35-36, 37A-37B, 37-38, 39A-39B, 39-40, 41A-41B, 41-42, 43A-43B, 43-44, 45A-45B, 45-46

Symbols and Representations

1.5.2 Understand the meaning of equality and inequality.

- **Use concrete objects to model language (e.g., same, different, equal, not equal, more, less). [CU]**
K: 63A-63B, 63-64, 87A-87B, 87088, 89A-89B, 89-90, 121A-121B, 121-122
- **Model/act out story problems to solve whole number equations and inequalities. [SP, CU, MC]**
K: Preparation 255A-255B, 255-256, 275A-275B, 275-276

EALR 2: The student uses mathematical reasoning to define and solve problems.

Component 2.1: Investigate and Analyze Situations

2.1.1 Analyze situations to determine known and unknown information in familiar situations.

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

2.1.2 Analyze situations to determine when information is missing or extraneous.

K: 125-126, 217-218, 233-234

Component 2.2: Formulate Questions and Define the Problem

2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and statistics.

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

2.2.2 Generate questions to be answered in familiar situations.

K: 1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

Component 2.3: Construct Solutions

2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and statistics to construct a solution.

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

Component 2.4: Draw Conclusions**2.4.1 Understand how to make conjectures and support them with evidence.**

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

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

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

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

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

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information**3.1.1 Apply a simple plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or statistics.**

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

3.1.2 Analyze mathematical information for a given purpose requiring number sense, measurement, geometric sense, or statistics, from one or two different sources using reading, listening, and observation.

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

Component 3.2: Organize and Interpret Information**3.2.1 Understand how to organize and interpret numerical, measurement, geometric or statistical information for a given purpose in at least one way (reflecting, verbalizing, discussing, or writing).**

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

Component 3.3: Represent and Share Information**3.3.1 Understand how to express ideas involving number sense, measurement, geometric sense, or statistics, using mathematical language and notation.**

K: 23-24, 49-50, 73-74, 99-100, 129-130, 157-158, 193-194, 221-222, 241-242, 261-262, 283-284, 301-302

3.3.2 Understand how to represent numerical, measurement, geometric, or statistical ideas and information to familiar people for a real-world purpose.

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

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics**4.1.1 Apply concepts and procedures from two of the content strands (number sense, measurement, geometric sense, or statistics) in a given problem or situation.**

K: 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 63-64, 65-66, 87-88, 91-92, 95-96, 113-114, 121-122, 255-256, 275-276, 293-294, 295-296, 297-298

4.1.2 Analyze mathematical models and representations to determine equivalence in familiar situations from number sense, measurement, geometric sense, or statistics.

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

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines
--

4.2.1 Analyze the concepts, strategies, and procedures from other disciplines to recognize mathematical patterns and concepts in familiar situations.

K: 1K, 25K, 51K, 75K, 101K, 131K, 159K, 195K, 223K, 243K, 263K, 285K

4.2.2 Apply mathematical thinking and modeling in other disciplines.

K: 1K, 25K, 51K, 75K, 101K, 131K, 159K, 195K, 223K, 243K, 263K, 285K

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

K: 6A-6F

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations
--

4.3.1 Understand how mathematics is used in everyday life.

K: 1, 25, 51, 75, 101, 131, 159, 195, 223, 243, 263, 285

4.3.2 Understand how mathematics is used in career settings.

K: See Grade 3: 101, 230

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade One

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand ways of representing whole numbers.

- **Represent a number to at least 100 in different ways (e.g., words, numerals, pictures, physical models) and translate from one representation to another. [CU, RL, MC]**
1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18
- **Group and regroup objects into 1's and 10's. [SP, CU, MC]**
1: 283A-283B, 283-284
- **Read, write, and recite numbers to at least 100.**
1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18
- **Count sets of objects less than 100 using a variety of grouping strategies.**
1: 11A-11B, 11-12, 13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 283A-283B, 283-284
- **Identify coins (penny, nickel, dime, quarter) and state their value.**
1: 331A-331B, 331-332, 333A-333B, 333-334, 335A-335B, 335-336, 337A-337B, 337-338, 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348

1.1.2 Understand sequential relationships among whole numbers.

- **Order three or more numbers to at least 100 from smallest to largest. [CU, RL]**
1: 29A-29B, 29-30, 31A-31B, 31-32, 297A-297B, 297-298, 301A-301B, 301-302
- **Use comparative language (e.g., less than, more than, equal to) to compare numbers to at least 100.**
1: 29A-29B, 29-30, 297A-297B, 297-298

- **Skip count by 2, 5, and 10.**
1: 255A-255B, 255-256, 257A-257B, 257-258
- **Count forwards and backwards from a given number.**
1: 255A-255B, 255-256, 257A-257B, 257-258

Computation

1.1.5 Understand meaning of addition and subtraction on whole numbers.

- **Express stories involving addition and subtraction (e.g., join, separate) with models, pictures, and symbols. [SP, CU, RL, MC]**
1: 45A-45B, 45-46, 61A-61B, 61-62, 75A-75B, 75-76, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440
- **Show relationships between addition and subtraction using physical models, diagrams, and acting out problems.**
1: 141A-141B, 141-142

1.1.6 Apply the procedures for addition and subtraction of simple whole numbers with fluency.

- **Use strategies (e.g., count on, count back, doubles) for addition and subtraction facts to at least sums to 12.**
1: 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130
- **Recall addition and subtraction facts through at least sums to 12.**
1: 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130
- **Solve problems involving addition and subtraction using and explaining student-invented procedures [SP, RL, CU]**
1: 45A-45B, 45-46, 61A-61B, 61-62, 75A-75B, 75-76, 91A-91B, 91-92, 93A-93B, 93-94, 95A-95B, 95-96, 97A-97B, 97-98, 103A-103B, 103-104, 105A-105B, 105-106, 107A-107B, 107-108, 125A-125B, 125-126, 127A-127B, 127-128, 129A-129B, 129-130, 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440

1.1.7 Apply appropriate strategies and tools for computing whole numbers.

- **Identify when to use mental math, paper/pencil, or calculator to solve problems.**
1: 417A-417B, 417-418, 419A-419B, 419-420, 425A-425B, 425-426, 435A-435B, 435-436, 437A-437B, 437-438, 439A-439B, 439-440; 459A-459B, 459-460, 461A-461B, 461-462, 463A-463B, 463-464, 465A-465B, 465-466, 471A-471B, 471-472, 473A-473B, 473-474, 475A-475B, 475-476, 477A-477B, 477-478

Estimation**1.1.8 Apply estimation strategies to determine the reasonableness of answers.**

- **Use a known quantity (e.g., chunking) to make reasonable estimates. [RL]**
1: 249A-249B, 249-250

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes, Units, and Tools**1.2.1 Understand and apply attributes to describe and compare objects.**

- **Order three or more objects according to an attribute (e.g., pencil lengths, students' heights, and thickness of books). [SP, CU]**
1: 365A-365B, 365-366, 383A-383B, 383-384, 389A-389B, 389-390
- **Use physical models of measuring units to fill, cover, match, or make the desired comparison of the attribute with the unit. [SP]**
1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390
- **Read a clock with only the hour hand and use approximate language (e.g., almost 7, a little after 7). [CU]**
1: 207A-207B, 207-208, 209A-209B, 209-210

1.2.2 Understand the importance of appropriate and consistent units.

- **Select units appropriate to the object being measured (e.g., measure length of classroom with footprints, not beans).**
1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390

- **Use a uniform unit to measure an object (e.g., cubes, paper strips).**
1: 365A-365B, 365-366, 369A-369B, 369-370, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 385A-385B, 385-386, 387A-387B, 387-388, 389A-389B, 389-390, 391A-391B, 391-392, 393A-393B, 393-394, 397A-397B, 397-398
- **Use a calendar as a record of time (e.g., yesterday, today, tomorrow, weeks, months, years).**
1: 225A-225B, 225-226, 227A-227B, 227-228

1.2.3 Understand the need for and apply appropriate tools to measure.

- **Measure a variety of objects using appropriate nonstandard tools.**
1: 365A-365B, 365-366, 371A-371B, 371-372, 373A-373B, 373-374, 375A-375B, 375-376, 383A-383B, 383-384, 389A-389B, 389-390

Component 1.3: Understand and apply concepts and procedures from geometric sense.
--

Properties and Relationships

1.3.1 Recall and understand characteristics of 2-D shapes and figures.

- **Name and identify characteristics of 2-D shapes and figures, including those in their surroundings. [CU, MC]**
1: 165A-165B, 165-166, 167A-167B, 167-168, 169A-169B, 169-170

1.3.2 Understand how to sort and compare 2-D shapes and figures using characteristics.

- **Identify and sort 2-D shapes and figures in their surroundings. [MC, RL]**
1: 165A-165B, 165-166, 167A-167B, 167-168, 169A-169B, 169-170
- **Compare 2-D shapes and figures using comparative language (e.g., longer, wider). [CU]**
1: 167A-167B, 167-168, 169A-169B, 169-170

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Statistics

1.4.3 Understand that data can be organized and displayed.

- **Construct bar graphs with concrete materials and record pictorially. [CU]**
1: 311A-311B, 311-312
- **Display results of data collection by making student-invented and conventional displays. [CU]**
1: 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314

1.4.5 Understand how a display provides information about a question.

- **Conduct a survey for a predetermined question and collect data using tallies, charts, lists, and/or pictures.**
1: 313A-313B, 313-314
- **Identify a question being answered on a display.**
1: 309A-309B, 309-310, 311A-311B, 311-312
- **Name an appropriate title for a display of data.**
1: 309-310, 311-312, 313-314

1.4.6 Understand information presented in student-made displays.

- **Explain how a display answers the survey question. [CU]**
1: 313-314
- **Interpret results and draw conclusions from student-made displays using comparative language (e.g. more, fewer). [CU, MC]**
1: 309A-309B, 309-310, 311A-311B, 311-312

Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns and Relationships

1.5.1 Understand classification concepts for identifying patterns.

- **Create and describe a variety of repeating patterns using sounds, objects, and symbols. [CU]**
1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262
- **Describe and extend a complex repeating pattern (e.g., ABAC, ABAC; snap, snap, clap, snap, stomp). [CU]**
1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262
- **Identify the unit in a repeating pattern (e.g., in A-A-B-A-A-B the unit is A-A-B).**
1: 3A-3B, 3-4, 5A-5B, 5-6, 255A-255B, 255-256, 257A-257B, 257-258, 261A-261B, 261-262
- **Identify and describe numerical patterns in the 100's chart. [CU]**
1: 255A-255B, 255-256, 257A-257B, 257-258

Symbols and Representations

1.5.2 Understand the meaning of the equality symbol (=).

- **Demonstrate equality by recording number sentences with balance (e.g., $9 = 4 + 5$, $4 + 5 = 2 + 7$, $9 = 9$).**
1: 221A-221B, 221-222, 479A-479B, 479-480, 485A-485B, 485-486
- **Complete open sentences showing equalities (e.g. $5 = \underline{\quad}$).**
1: 261A-261B, 261-262

EALR 2: The student uses mathematical reasoning to define and solve problems.**Component 2.1: Investigate and Analyze Situations****2.1.1 Analyze situations to determine known and unknown information in familiar situations.**

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

2.1.2 Analyze situations to determine when information is missing or extraneous.

1: 99A-99B, 99-100

Component 2.2: Formulate Questions and Define the Problem**2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and statistics.**

1: 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

2.2.2 Generate questions to be answered in familiar situations.

1: 1, 43, 89, 123, 155, 203, 239, 279, 329, 363, 415, 457

Component 2.3: Construct Solutions**2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and statistics to construct a solution.**

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

Component 2.4: Draw Conclusions**2.4.1 Understand how to make conjectures and support them with evidence.**

1: 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

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

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

1: 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information**3.1.1 Apply a simple plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or statistics.**

1: 307A-307B, 307-308, 309A-309B, 309-310, 311A-311B, 311-312, 313A-313B, 313-314

3.1.2 Analyze mathematical information for a given purpose requiring number sense, measurement, geometric sense, or statistics, from one or two different sources using reading, listening, and observation.

1: 7A-7B, 7-8, 21A-21B, 21-22, 33A-33B, 33-34, 57A-57B, 57-58, 71A-71B, 71-72, 79A-79B, 79-80, 99A-99B, 99-100, 111A-111B, 111-112, 113-113B, 113-114, 133A-133B, 133-134, 143A-143B, 143-144, 145A-145B, 145-146, 177A-177B, 177-178, 191A-191B, 191-192, 193A-193B, 193-194, 215A-215B, 215-216, 223A-223B, 223-224, 229A-229B, 229-230, 251A-251B, 251-252, 261A-261B, 261-262, 269A-269B, 269-270, 291A-291B, 291-292, 317A-317B, 317-318, 319A-319B, 319-320, 339A-339B, 339-340, 351A-351B, 351-352, 353A-353B, 353-354, 369A-369B, 369-370, 379A-379B, 379-380, 405A-405B, 405-406, 431A-431B, 431-432, 445A-445B, 445-446, 447A-447B, 447-448, 467A-467B, 467-468, 481A-481B, 481-482, 483A-483B, 483-484

Component 3.2: Organize and Interpret Information**3.2.1 Understand how to organize and interpret numerical, measurement, geometric or statistical information for a given purpose in at least one way (reflecting, verbalizing, discussing, or writing).**

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

Component 3.3: Represent and Share Information**3.3.1 Understand how to express ideas involving number sense, measurement, geometric sense, or statistics, using mathematical language and notation.**

1: 41-42, 87-88, 121-122, 153-154, 201-202, 237-238, 277-278, 327-328, 361-362, 413-414, 455-456, 491-492

3.3.2 Understand how to represent numerical, measurement, geometric, or statistical ideas and information to familiar people for a real-world purpose.

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

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics

4.1.1 Apply concepts and procedures from two of the content strands (number sense, measurement, geometric sense, or statistics) in a given problem or situation.

1: 3-4, 5-6, 7-8, 49-50, 51-52, 65-66, 67-68, 71-72, 77-78, 93-94, 133-134, 137-138, 139-140, 141-142, 255-256, 261-262, 297-298, 301-302, 315-316, 421-422, 427-428, 435-436, 437-438, 439-440, 445-446

4.1.2 Analyze mathematical models and representations to determine equivalence in familiar situations from number sense, measurement, geometric sense, or statistics.

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

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines

4.2.1 Analyze the concepts, strategies, and procedures from other disciplines to recognize mathematical patterns and concepts in familiar situations.

1: 3B, 5B, 11B, 13B, 15B, 17B, 45B, 47B, 49B, 51B, 61B, 63B, 65B, 67B, 91B, 93B, 95B, 97B, 103B, 105B, 107B, 125B, 127B, 129B, 137B, 139B, 141B, 157B, 159B, 161B, 165B, 167B, 169B, 181B, 183B, 185B, 205B, 207B, 209B, 219B, 221B, 223B, 241B, 243B, 245B, 255B, 257B, 263B, 281B, 283B, 285B, 295B, 297B, 299B, 307B, 309B, 311B, 331B, 333B, 335B, 343B, 345B, 347B, 371B, 373B, 375B, 383B, 385B, 387B, 417B, 419B, 421B, 435B, 437B, 439B, 459B, 461B, 463B

4.2.2 Apply mathematical thinking and modeling in other disciplines.

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

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

1: 124, 328, 358, 462

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations

4.3.1 Understand how mathematics is used in everyday life.

1: 1, 43, 89, 123, 155, 203, 239, 279, 329, 363, 415, 457

4.3.2 Understand how mathematics is used in career settings.

1: See Grade 3: 101, 230

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade Two

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand place value in whole numbers.

- **Group and regroup objects into 1’s, 10’s, and 100’s and explain relationships.**
2: 81A-81B, 81-82, 83A-83B, 83-84
- **Make combinations and name total value of coins.**
2: 109A-109B, 109-110, 111A-111B, 111-112, 113A-113B, 113-114, 115A-115B, 115-116, 117A-117B, 117-118, 119A-119B, 119-120, 121A-121B, 121-122
- **Determine the value of a digit based on its position in a number.**
2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 91A-91B, 91-92
- **Read and write numbers to at least 1,000.**
2: 81A-81B, 81-82, 83A-83B, 83-84, 85A-85B, 85-86, 95A-95B, 95-96, 101A-101B, 101-102, 103A-103B, 103-104

1.1.2 Understand sequential relationships among whole numbers.

- **Order three or more numbers to at least 1,000 from smallest to largest. [CU, RL]**
2: 15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410
- **Use comparative language (e.g., less than, more than, equal to) to compare numbers to at least 1,000.**
2: 15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410
- **Demonstrate equal sharing of regions and sets.**
2: 269A-269B, 269-270, 277A-277B, 277-278

1.1.3 Understand and apply the concepts of odd and even numbers.

- **Identify a number as odd or even.**
2: 101A-101B, 101-102
- **Use concepts of odd and even numbers (e.g., even+even=even, odd+odd=even, even+odd=odd). [RL, SP]**
2: 101A-101B, 101-102

Computation**1.1.5 Understand meaning of addition, and subtraction, and how they relate to one another.**

- **Represent addition and subtraction problems using models, pictures, and symbols.**
2: 3A-3B, 3-4, 13A-13B, 13-14, 15A-15B, 15-16
- **Show relationships between addition and subtraction using physical models, diagrams, and acting out problems.**
2: 65A-65B, 65-66
- **Model real life situations involving addition and subtraction using physical models, diagrams, and acting out. [SP,CU,MC]**
2: 44, 46, 48, 50, 52, 54, 58, 62, 64, 66

1.1.6 Apply the procedures for addition and subtraction of whole numbers with fluency.

- **Use strategies for addition and subtraction facts through at least 20.**
2: 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66
- **Recall addition and subtraction facts through at least 20.**
2: 43A-43B, 43-44, 45A-45B, 45-46, 47A-47B, 47-48, 49A-49B, 49-50, 51A-51B, 51-52, 53A-53B, 53-54, 57A-57B, 57-58, 61A-61B, 61-62, 63A-63B, 63-64, 65A-65B, 65-66
- **Solve problems involving addition and subtraction with three digit numbers using and explaining student-invented procedures. [SP, RL, CU]**
2: 431A-431B, 431-432, 433A-433B, 433-434, 435A-435B, 435-436, 447A-447B, 447-448, 449A-449B, 449-450, 451A-451B, 451-452

1.1.7 Apply appropriate strategies and tools for computing whole numbers.

- **Use mental math strategies to compute (e.g., composing and decomposing numbers, friendly numbers, neighbors) through 100.**
2: 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228
- **Use calculator and/or paper/pencil to solve problems. [SP]**
2: 135A-135B, 135-136, 137A-137B, 137-138, 139A-139B, 139-140, 141A-141B, 141-142, 145A-145B, 145-146, 147A-147B, 147-148, 149A-149B, 149-150, 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194

Estimation**1.1.8 Apply estimation strategies to predict computation results and to determine the reasonableness of answers.**

- **Use estimation strategies (e.g., front-end estimation, clustering) to predict computation results and to determine the reasonableness of answers. [SP, RL].**
2: 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228
- **Justify reasonableness of an estimate in addition and subtraction. [CU, RL]**
2: 175A-175B, 175-176, 177A-177B, 177-178, 179A-179B, 179-180, 181A-181B, 181-182, 185A-185B, 185-186, 187A-187B, 187-188, 189A-189B, 189-190, 191A-191B, 191-192, 193A-193B, 193-194, 227A-227B, 227-228

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes, Units, and Tools**1.2.1 Understand and apply attributes to measure objects.**

- **Identify attributes of an object that are measurable (e.g., time, length, distance around, capacity, area, and/or weight of objects). [CU, MC]**
2: 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370

- **Compare lengths or distances where direct comparison is not possible (e.g., use a string or paper strip to compare the height and width of a table). [SP, MC]**
2: 341A-341B, 341-342

1.2.2 Understand that unit size affects the outcome of the measurement.

- **Explain why more small paper clips than large are needed to measure the same length. [CU]**
2: 341A-341B, 341-342
- **Select the most appropriate unit to measure a given time (e.g., Would you use minutes or hours to measure brushing your teeth, eating dinner, sleeping?). [MC]**
2: 297A-297B, 297-298

1.2.3 Understand the need for and apply appropriate tools to measure.

- **Select a tool that can measure the given attribute (e.g., analogue clock: time, string: length, tiles: area, balance: weight, interlocking cubes: capacity).**
2: 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370
- **Demonstrate measurement procedure (e.g., place units end-to-end, not overlapping, straight line, and start at end point).**
2: 343A-343B, 343-344, 345A-345B, 345-346, 347A-347B, 347-348, 355A-355B, 355-356, 357A-357B-357-358, 365A-365B, 365-366, 367A-367B, 367-368, 369A-369B, 369-370

Procedures, Precision, and Estimation

1.2.6 Understand the concept of estimation in measurement.

- **Estimate length, area, capacity, and weight using nonstandard units.**
2: 297A-279B, 297-298, 341A-341B, 341-342
- **Use important benchmarks or referents (e.g., 5 or 10) to make initial and revised estimates.**
2: 297A-279B, 297-298, 341A-341B, 341-342
- **Explain how a referent helps to make a reasonable estimate. [CU]**
2: 297A-279B, 297-298, 341A-341B, 341-342

Component 1.3: Understand and apply concepts and procedures from geometric sense.

Properties and Relationships

1.3.1 Understand characteristics of 2-D geometric shapes.

- **Sort and describe characteristics of 2-D geometric figures (e.g., various polygons). [PS, CU]**
2: 255A-255B, 255-256

1.3.3 Understand the locations of numbers on a positive number line.

- **Indicate if a number is above or below a benchmark number (e.g., greater than or less than 10). [CU]**
2: 95A-95B, 95-96, 229, 419
- **Describe the location of a given number on a number line. [CU]**
2: 95A-95B, 95-96, 229, 419
- **Identify a point on a number line.**
2: 95A-95B, 95-96, 229, 419

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Statistics

1.4.3 Understand the components of a graph.

- **Identify title, horizontal and vertical axes, and key.**
2: 321A-321B, 321-322, 323A-323B, 323-324
- **Construct a bar graph with a title, key, and single unit increment.**
2: 321A-321B, 321-322

1.4.6 Understand how to read and interpret data from graphs.

- **Interpret a bar graph for comparative information (e.g., How many more than, less than?).**
2: 321A-321B, 321-322, 328

Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns and Relationships

1.5.1 Understand how simple patterns are generated.

- **Translate a pattern from one representation to another (e.g., snap-clap-stomp translates to ABC). [CU]**
2: 99A-99B, 99-100, 467A-467B, 467-468
- **Model growing patterns using objects and pictures (e.g., a stair step sequence, or a “growing” L shape in which a unit is added to each leg to show 3, 5, 7, 9, . . .) [SP, RL]**
2: 99A-99B, 99-100, 467A-467B, 467-468
- **Identify, extend, create, and explain patterns of addition and subtraction represented in charts and tables. [CU,MC]**
2: 99A-99B, 99-100, 467A-467B, 467-468

Symbols and Representations

1.5.2 Understand symbols and labels used to represent situations.

- **Explain and use the symbols $<$ and $>$ to express relationships. [CU].**
2: 15A-15B, 15-16, 91A-91B, 91-92, 399A-399B, 399-400, 409A-409B, 409-410
- **Use number sentences with symbols and labels to represent real-world problems involving addition and subtraction. [SP, MC]**
2: 9A-9B, 9-10, 57A-57B, 57-58

Evaluating and Solving

1.5.3 Understand and apply the procedures for evaluating and solving for the unknown using addition and subtraction.

- **Solves equations with an “unknown” (e.g., $6 + \square = 11$).**
2: 99A-99B, 99-100, 413A-413B, 413-414, 467A-467B, 467-468

EALR 2: The student uses mathematical reasoning to define and solve problems.**Component 2.1: Investigate and Analyze Situations****2.1.1 Analyze situations to determine known and unknown information in familiar situations.**

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

2.1.2 Analyze situations to determine when information is missing or extraneous.

2: 233A-233B, 233-234

Component 2.2: Formulate Questions and Define the Problem**2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and statistics.**

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

2.2.2 Generate questions to be answered in familiar situations.

2: 1, 41, 79, 133, 173, 209, 245, 289, 339, 389, 425, 465

Component 2.3: Construct Solutions**2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and statistics to construct a solution.**

2: 9A-9B, 9-10, 19A-19B, 19-20, 31-32, 57A-57B, 57-58, 67A-67B, 67-68, 69-70, 89A-89B, 89-90, 105A-105B, 105-106, 123-124, 155A-155B, 155-156, 161A-161B, 161-162, 163-164, 189A-189B, 189-190, 197A-197B, 197-198, 199-200, 221A-221B,

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

Component 2.4: Draw Conclusions**2.4.1 Understand how to make conjectures and support them with evidence.**

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

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

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

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

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

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information

3.1.1 Apply a simple plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or statistics.

2: 311A-311B, 311-312, 313A-313B, 313-314, 315A-315B, 315-316

3.1.2 Analyze mathematical information for a given purpose requiring number sense, measurement, geometric sense, or statistics, from one or two different sources using reading, listening, and observation.

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

Component 3.2: Organize and Interpret Information

3.2.1 Understand how to organize and interpret numerical, measurement, geometric or statistical information for a given purpose in at least one way (reflecting, verbalizing, discussing, or writing).

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

Component 3.3: Represent and Share Information**3.3.1 Understand how to express ideas involving number sense, measurement, geometric sense, or statistics, using mathematical language and notation.**

2: 39-40, 77-78, 131-132, 171-172, 207-208, 243-244, 287-288, 337-338, 387-388, 423-424, 463-464, 497-498

3.3.2 Understand how to represent numerical, measurement, geometric, or statistical ideas and information to familiar people for a real-world purpose.

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

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics**4.1.1 Apply concepts and procedures from two of the content strands (number sense, measurement, geometric sense, or statistics) in a given problem or situation.**

2: 5-6, 9-10, 17-18, 19-20, 23-24, 25-26, 27-28, 29-30, 49-50, 57-58, 63-64, 65-66, 91-92, 95-96, 97-98, 99-100, 101-102, 115-116, 117-118, 141-142, 149-150, 157-158, 159-160, 161-162, 187-188, 191-192, 193-194, 221-222, 227-228, 229-230, 231-232, 247-248, 249-250, 305-306, 325-326, 355-356, 397-398, 399-400, 401-402, 407-408, 409-410, 429-430, 443-444, 445-446, 453-454, 467-468, 469-470, 473-474, 479-480, 487-488

4.1.2 Analyze mathematical models and representations to determine equivalence in familiar situations from number sense, measurement, geometric sense, or statistics.

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

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines**4.2.1 Analyze the concepts, strategies, and procedures from other disciplines to recognize mathematical patterns and concepts in familiar situations.**

2: 5B, 9B, 17B, 19B, 23B, 25B, 27B, 29B, 49B, 57B, 63B, 65B, 91B, 95B, 97B, 99B, 101B, 115B, 117B, 141B, 149B, 157B, 159B, 161B, 187B, 191B, 193B, 221B, 227B, 229B, 231B, 247B, 249B, 305B, 325B, 355B, 397B, 399B, 401B, 407B, 409B, 429B, 443B, 445B, 453B, 467B, 469B, 473B, 479B, 487B

4.2.2 Apply mathematical thinking and modeling in other disciplines.

2: 5B, 9B, 17B, 19B, 23B, 25B, 27B, 29B, 49B, 57B, 63B, 65B, 91B, 95B, 97B, 99B, 101B, 115B, 117B, 141B, 149B, 157B, 159B, 161B, 187B, 191B, 193B, 221B, 227B, 229B, 231B, 247B, 249B, 305B, 325B, 355B, 397B, 399B, 401B, 407B, 409B, 429B, 443B, 445B, 453B, 467B, 469B, 473B, 479B, 487B

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

2: 27, 438

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations**4.3.1 Understand how mathematics is used in everyday life.**

2: 38, 76, 130, 170, 206, 242, 286, 336, 386, 422, 462, 496

4.3.2 Understand how mathematics is used in career settings.

2: See Grade 3: 101, 230

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade Three

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand the concepts of whole numbers.

- **Represent a number to at least 1,000 in different ways (e.g., words, numerals, pictures, physical models).**
3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13
- **Translate from one representation of a whole number to another in standard, expanded, and word forms. [SR, CU, RL, MC]**
3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13
- **Read and write numbers to at least 100,000.**
3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13
- **Generate equivalent representations for a given number by decomposing and composing.**
3: 6-7, 10-11
- **Represent the place value of a number in multiple ways using physical models and pictures.**
3: 4A-4B, 4-5, 6A-6B, 6-7, 8A-8B, 8-9, 10A-10B, 10-11, 12A-12B, 12-13

1.1.2 Understand relative values of whole numbers.

- **Compare whole number values to at least 1,000,000 using the symbols for "greater than", "less than", and "equal to".**
3: 18A-18B, 18-21, 22A-22B, 22-23, 506A-506B, 506-509, 568A-568B, 568-571
- **Order 3 or more numbers to at least 1,000,000 from smallest to largest.**
3: 18A-18B, 18-21, 22A-22B, 22-23, 506A-506B, 506-509, 568A-568B, 568-571

1.1.3 Understand the commutative, associative, and identity properties of addition on whole numbers.

- Describe how the commutative property works with addition and not subtraction, using models. [RL, CU]
3: 66A-66B, 66-67
- Describe how the identity property works with both addition and subtraction using pictures. [RL, CU]
3: 286-287
- Evaluate simple equations as true or false and explain based on any of the properties (e.g., $14 + (62 + 38) = (14 + 62) + 38$). [RL]
3: 168A-168B, 168-169

1.1.5 Understand the meaning of multiplication and division of whole numbers.

- Illustrate multiplication and division using models and diagrams.
3: 260A-260B, 260-261, 262A-262B, 262-265, 370A-370B, 370-371, 372A-372B, 372-373
- Illustrate and explain the inverse relationship between multiplication and division using physical diagrams, words, and symbols (e.g., arrays, fact families).
3: 384A-384B, 384-385
- Describe and compare strategies to solve problems involving multiplication and division (e.g., alternative algorithms, decomposition, properties of multiplication). [CU, RL]
3: 276A-276B, 276-279, 280A-280B, 280-281, 282A-282B, 282-283, 286A-286B, 286-287, 288A-288B, 288-291, 292A-292B, 292-293, 316A-316B, 316-317, 318A-318B, 318-319, 320A-320B, 320-323, 324A-324B, 324-327, 328A-328B, 328-331, 386A-386B, 386-387, 388A-388B, 388-389, 390A-390B, 390-391, 392A-392B, 392-393, 396A-396B, 396-397, 402A-402B, 402-403

Computation**1.1.6 Understand and apply procedures for addition and subtraction on whole numbers with fluency.**

- Describe and compare strategies to solve three-digit addition and subtraction problems (e.g., child developed algorithms, decomposition). [SP, RL, CU, MC]
3: 132A-132B, 132-135, 152A-152B, 152-155

- **Use joining, separating, adding-on, and finding the difference to solve problems.**
3: 66A-66B, 66-69, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 94A-94B, 94-95, 96A-96B, 96-97
 - **Write and solve multi-step problem situations that involve addition and subtraction. [SP, RL, CU, MC]**
3: 136A-136B, 136-139
- 1.1.7 Apply strategies for mental arithmetic, pencil and paper, or calculator as appropriate to the task involving addition and subtraction of whole numbers.**
- **Use appropriate strategies and tools from among mental computation, estimation, calculators, and paper and pencil to compute in a problem situation.**
3: 126A-126B, 126-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-155, 156A-156B, 156-157, 162A-162B, 162-165, 166A-166B, 166-167
- 1.1.8 Understand situations in which estimation is appropriate and apply estimation strategies to determine the reasonableness of answers involving addition and subtraction of whole numbers.**
- **Describe and justify reasonableness of an estimate in computation.**
3: 80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161
 - **Defend situations in which estimation is sufficient (e.g., grocery shopping, lunch count, party supplies).**
3: 160A-160B, 160-161
 - **Use a variety of estimation strategies (e.g., multiples of 10 and 100, rounding, front-end estimation, compatible numbers, clustering).**
3: 80A-80B, 80-81, 82A-82B, 82-83, 86A-86B, 86-89, 90A-90B, 90-91, 94A-94B, 94-95, 96A-96B, 96-97, 98A-98B, 98-101, 160A-160B, 160-161

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes and Units

1.2.1 Understand the attributes of length, perimeter, time, weight, and temperature.

- **Describe the different measures of the hour and minute hand of a clock. [CU]**
3: 192A-192B, 192-195, 196A-196B, 196-197
- **Given an object, name the attributes that can be measured. [CU, MC]**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- **Identify temperature on thermometers with different scales (e.g., increments of 1, 2, 5, or 10 degrees).**
3: 696A-696B, 696-697
- **Explain purposes for linear measurements. [CU]**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- **Place objects in order based on their weight.**
3: 690A-690B, 690-693

1.2.2 Understand and apply standard units to measure the attributes of length, perimeter, time, weight, and temperature.

- **Given an attribute, identify an appropriate unit of measurement.**
3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693
- **Measure objects and compare measurements using standard units.**
3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693

1.2.3 Apply appropriate tools to measure the attributes of length, perimeter, time, weight, and temperature.

- **Select an appropriate tool to measure and justify the choice.**
3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693

- **Name and use appropriate tools for measuring length, perimeter, time, weight, and temperature.**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- **Measure perimeter for regular and irregular shapes with standards units (e.g., centimeters, inches, etc.).**
3: 464A-464B, 464-467
- **Tell time on an analog clock.**
3: 192A-192B, 192-195, 196A-196B, 196-197
- **Weigh objects using a variety of tools (e.g., balance scales, calibrated scales).**
3: 690A-690B, 690-693, 694A-694B, 694-697

Procedures, Precision, and Estimation

1.2.4 Apply the measurement procedure to measure the attributes of length, perimeter, time, weight, and temperature.

- **Determine the attribute to be measured.**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- **Determine the appropriate unit to measure the attribute.**
3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693
- **Select an appropriate tool according to the unit chosen.**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533
- **Compare the object being measured with the units on the tools and record and label the units.**
3: 468A-468B, 468-471, 532A-532B, 532-533, 680A-680B, 680-683, 690A-690B, 690-693

1.2.5 Understand the benefits of standard units of measurement.

- **Explain why standard units of measurement are more appropriate than nonstandard (e.g., there are different sized hands/feet/paperclips). [RL, CU, MC]**
3: 464A-464B, 464-465, 468A-468B, 468-471, 472A-472B, 472-473, 532A-532B, 532-533

1.2.6 Understand when approximate measurements are sufficient and apply estimation strategies to obtain reasonable measurements of length, perimeter, time, weight, and temperature.

- **Identify situations when approximate measurements are sufficient.**
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697
- **Estimate a measurement using standard or nonstandard units (e.g., paper clips, inches, and minutes). [SP]**
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697
- **Use referents to standard units (e.g., width of pinkie finger is similar to a centimeter). [MC]**
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697
- **Recognize when a measurement is approximate rather than exact (e.g., string vs. tape measure, paper clip vs. ruler). [RL]**
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697
- **Use estimation to justify reasonableness of a measurement (e.g., estimate length of a classroom by pacing it off, select temperature of an ice rink from a range of degrees). [RL]**
3: 533, 535, 582-583, 628, 681, 682, 685, 691, 697

Component 1.3: Understand and apply concepts and procedures from geometric sense.**Properties and Relationships****1.3.1 Understand the concept of congruence between 2-D shapes and figures.**

- **Identify, describe and compare congruent 2-D geometric figures. [SR, CU, MC]**
3: 456A-456B, 456-459
- **Given a variety of figures, determine which figures are congruent.**
3: 456A-456B, 456-459

1.3.2 Understand and analyze attributes and properties of polygons.

- **Identify, name and describe the attributes and properties of polygons.**
3: 446A-446B, 446-449
- **Sort polygons according to their attributes and properties. [RL]**
3: 450A-450B, 450-453, 454A-454B, 454-456

- **Identify the degree of each angle in a regular polygon.**
3: preparation: 446A-446B, 446-449
- **Given two polygons, explain how they are alike and different in terms of their attributes and properties (e.g., using a Venn diagram). [RL, CU]**
3: 450A-450B, 450-453, 454A-454B, 454-456

1.3.3 Understand the location of numbers on a positive number line.

- **Given directions for movement on a number line, identify the point of final destination using real-world examples (e.g., travel back and forth on a street, temperature variation at different times of the day, climbing up and down stairs). [SP, RL, MC]**
3: 31, 512A-512B, 512-513
- **Identify the interval on a given number line (e.g., recognize scale on a graph). [CU]**
3: 31, 512A-512B, 512-513

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Statistics

1.4.3 Understand how to organize, display, and interpret data in tables, tally charts, line plots, or bar graphs.

- **Create simple bar graphs including labels for title, both axes, scale units (e.g., 2's, 5's, 10's), and key if needed. [SP, CU, MC]**
3: 228A-228B, 228-231
- **Interpret graphs for comparative information (e.g., find the difference in selected data). [SP, CU, MC]**
3: 212A-212B, 212-215

1.4.5 Understand how to pose questions and collect data about self and one's surroundings.

- **Make a simple survey and collect data (e.g., use tally marks, make a table). [CU]**
3: 204A-204B, 204-207

1.4.6 Analyze data appropriate to the grade level.

- **Pose questions that can be answered from a given graph. [CU, MC]**
3: 222A-222B, 222-223

- **Interpret bar graphs for comparative information. [CU]**
3: 212A-212B, 212-215
- **Make inferences based on the data and/or determine if the data can support inferences made. [CU, MC]**
3: 212A-212B, 212-215, 222A-222B, 222-223

Component 1.5: Understand and apply concepts and procedures from algebraic sense.
--

Patterns and Representations

1.5.1 Understand rules for number patterns, shapes, and objects based on addition or subtraction between terms.

- **Recognize, extend, and describe numerical patterns (e.g., skip counting, 100 chart, multiplication table). [CU]**
3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345
- **Describe the pattern in a number sequence (e.g., Guess My Rule, Function Machine). [CU]**
3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345
- **Describe patterns numbers, shapes and objects and represent them with tables or symbols. [CU]**
3: 24-27, 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345
- **Identify the rule for a pattern based on a single operation (e.g., add 3).**
3: 277, 282, 286, 288-289, 332A-332B, 332-335, 340-341, 344-345

Symbols and Representations

1.5.2 Understand equations and inequalities that represent simple situations involving addition or subtraction.

- **Write an equation or expression for a given situation. (e.g., There are 23 children in a class. If 15 are present, how many are absent?). [SP]**
3: 168A-168B, 168-169
- **Given an expression or equation using =, <, >, and ≠ symbols, identify and/or write a situation that represents it. [SP, CU, MC]**
3: 168A-168B, 168-169

Evaluating and Solving**1.5.3 Understand and apply the procedures for evaluating and solving one-step equations using addition and subtraction.**

- **Solve problems involving equality (e.g., $5 + 3 = \theta + 2$).**
3: 344A-344B, 344-345
- **Write, solve, and explain simple mathematical statements (e.g., $7 + \theta > 8$ or $\theta + 8 = 10$). [CU]**
3: 344A-344B, 344-345

EALR 2: The student uses mathematical reasoning to define and solve problems.**Component 2.1: Investigate and Analyze Situations****2.1.1 Analyze situations to determine known and unknown information in familiar situations.**

3: 14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

2.1.2 Analyze situations to determine when information is missing or extraneous.

3: 540A-540B, 540-541

Component 2.2: Formulate Questions and Define the Problem**2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and statistics.**

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

2.2.2 Generate questions to be answered in familiar situations.**3:** 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707**Component 2.3: Construct Solutions****2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and statistics to construct a solution.****3:** 14A-14B, 14-15, 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 140-143, 160A-160B, 160-161, 170-171, 216A-216B, 216-217, 236A-236B, 236-237, 238-239, 270A-270B, 270-273, 284A-284B, 284-285, 294-295, 332A-332B, 332-333, 346A-346B, 346-347, 348-349, 380A-380B, 380-381, 404A-404B, 404-405, 406-407, 436A-436B, 436-439, 474A-474B, 474-475, 476-477, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 590-591, 644A-644B, 644-645, 656A-656B, 656-657, 658-659, 698A-698B, 698-699, 708A-708B, 708-709, 710-711**Component 2.4: Draw Conclusions****2.4.1 Understand how to make conjectures and support them with evidence.****3:** 14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709**2.4.2 Analyze solutions to draw conclusions and support them with evidence.****3:** 14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

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

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information**3.1.1 Apply a simple plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or statistics.**

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

3.1.2 Analyze mathematical information for a given purpose requiring number sense, measurement, geometric sense, or statistics, from one or two different sources using reading, listening, and observation.

3: 14A-14B, 14-15, 32A-32B, 42A-42B, 42-43, 76A-76B, 76-77, 102A-102B, 102-103, 104-105, 140A-140B, 160A-160B, 160-161, 216A-216B, 216-217, 236A-236B, 236-237, 270A-270B, 270-273, 284A-284B, 284-285, 332A-332B, 332-333, 346A-346B, 346-347, 380A-380B, 380-381, 404A-404B, 404-405, 436A-436B, 436-439, 474A-474B, 474-475, 528A-528B, 528-529, 540A-540B, 540-541, 578A-578B, 578-579, 588A-588B, 588-589, 644A-644B, 644-645, 656A-656B, 656-657, 698A-698B, 698-699, 708A-708B, 708-709

Component 3.2: Organize and Interpret Information

3.2.1 Understand how to organize and interpret numerical, measurement, geometric or statistical information for a given purpose in at least one way (reflecting, verbalizing, discussing, or writing).

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

Component 3.3: Represent and Share Information

3.3.1 Understand how to express ideas involving number sense, measurement, geometric sense, or statistics, using mathematical language and notation.

3: 52-53, 112-113, 178-179, 246-247, 302-303, 356-357, 414-415, 484-485, 550-551, 598-599, 666-667, 718-179

3.3.2 Understand how to represent numerical, measurement, geometric, or statistical ideas and information to familiar people for a real-world purpose.

3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics

4.1.1 Apply concepts and procedures from two of the content strands (number sense, measurement, geometric sense, or statistics) in a given problem or situation.

3: 24-25, 66-69, 70-71, 72-73, 76-77, 168-169, 260-261, 262-263, 286-287, 342-343, 344-345, 384-385, 404-405

4.1.2 Analyze mathematical models and representations to determine equivalence in familiar situations from number sense, measurement, geometric sense, or statistics.

3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines

4.2.1 Analyze the concepts, strategies, and procedures from other disciplines to recognize mathematical patterns and concepts in familiar situations.

3: 24B, 66B, 70B, 72B, 76B, 168-B, 260B, 262B, 286B, 342B, 344B, 384B, 404B

4.2.2 Apply mathematical thinking and modeling in other disciplines.

3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

3: 27, 438

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations

4.3.1 Understand how mathematics is used in everyday life.

3: 21, 101, 155, 215, 279, 323, 377, 453, 525, 575, 629, 707

4.3.2 Understand how mathematics is used in career settings.

3: 101, 230

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade Four

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand the concept of fractions as part/whole.

- **Interpret fractions as parts of a whole.**
4: 500A-500B, 500-501, 502A-502B, 502-503
- **Symbolically represent parts of a whole and/or parts of a set with common denominators.**
4: 500A-500B, 500-501, 502A-502B, 502-503
- **Explain how common fractions represent information across the curriculum (e.g., interpreting circle graphs, fraction of states that border an ocean). [CU, MC, SP]**
4: 500B, 502B

1.1.2 Understand the relative values of simple fractions.

- **Model and describe equivalent fractions (e.g., paper folding, geo-boards, parallel number lines). [CU]**
4: 516A-516B, 516-519
- **Use a number line to approximate and label halves, thirds, and fourths in relationship to whole units. [CU, MC]**
4: 504A-504B, 504-507
- **Order fractions with like denominators using physical models, pictures, and symbols [CU, MC]**
4: 524A-524B, 524-527

- **Demonstrate equivalent relationships between decimals and simple fractions (e.g., \$.50 is equal to $\frac{1}{2}$ a dollar and $\frac{50}{100}$ using models. [CU]**
4: 624A-624B, 624-627

1.1.3 Understand the commutative, associative, identity, and zero properties of multiplication on whole numbers.

- **Describe how the commutative property works with multiplication and not division using models. [RL, CU]**
4: 129, 132-134
- **Describe how the identity property for addition is different from the identity property for multiplication using pictures. [RL, CU]**
4: 129, 132-134
- **Evaluate simple equations as true or false and explain based on any of the properties for multiplication (e.g., $4 \times (5 \times 6) = (4 \times 5) \times 6$). [RL]**
4: 100-101, 692-694

1.1.5 Understand the meaning of addition and subtraction of non-negative decimals and like-denominator fractions.

- **Show addition and subtraction of decimals through hundredths using models(e.g., base ten blocks, fraction circles with decimal ring, money). [CU]**
4: 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647
- **Show addition and subtraction of fractions with like denominators using models (e.g., fraction circles, number lines, geo-boards). [CU]**
4: 564A-564B, 564-567, 574A-574B, 574-577

Computation

1.1.6 Understand and apply the procedures for multiplication and division on whole numbers with fluency.

- **Use a variety of strategies to solve multiplication and division facts through 12's.**
4: 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153
- **Record, share, and evaluate algorithms used in computational situations. [CU, RL]**
4: 124A-124B, 124-127, 128A-128B, 128-131, 132A-132B, 132-135, 136A-136B, 136-139, 146A-146B, 146-147, 148A-148B, 148-149, 150A-150B, 150-151, 152A-152B, 152-153

- **Write and solve problem situations with whole numbers using a combination of any two operations. [SP, RL, CU, MC]**
4: 156A-156B, 156-157
- **Interpret remainders of a division problem in a given situation. [SP, RL, MC]**
4: 372A-372B, 372-373, 384A-384B, 384-385

1.1.7 Apply strategies for mental arithmetic, pencil and paper, or calculator as appropriate to the task involving multiplication and division of whole numbers.

- **Select and justify appropriate strategies and tools from among mental computation, estimation, calculators, and paper and pencil to compute in a problem situation.**
4: 76A-76B, 76-79, 80A-80B, 80-81, 82A-82B, 82-85, 86A-86B, 86-89, 270A-270B, 270-273, 274A-274B, 274-277, 332A-332B, 332-335, 336A-336B, 336-337, 380A-380B, 380-383, 386A-386B, 386-389, 390A-390B, 390-391

Computation

1.1.8 Understand situations in which estimation is appropriate and apply estimation strategies to determine the reasonableness of answers involving multiplication and division of whole numbers.

- **Identify situations when estimation is not appropriate. [RL]**
4: 600A-600B, 600-601
- **Make and explain an appropriate adjustment when estimate and solution don't agree. [CU, SR, RL]**
4: 600A-600B, 600-601
- **Using a variety of strategies mentally approximate sums, differences, products, and quotients.**
4: 62A-62B, 62-63, 64A-64B, 64-67, 68A-68B, 68-71, 72A-72B, 72-73, 258A-258B, 258-261, 316A-316B, 316-319, 368A-368B, 368-371, 636A-636B, 636-637

Component 1.2: Understand and apply concepts and procedures from measurement.

Attributes, Units, and Tools

1.2.1 Understand the concept of area.

- **Demonstrate that area is covering a shape and perimeter is surrounding a shape. [CU, MC]**
4: 468A-468B, 468-473
- **Describe situations where area is the best measurable attribute (e.g., buying carpet, painting a wall, picking largest bedroom). [CU, MC]**
4: 468A-468B, 468-473
- **Compare areas of different shapes and sizes.**
4: 468A-468B, 468-473

1.2.2 Understand and apply standard units to measure the attribute of area.

- **Measure area for regular and irregular shapes (e.g., tiles, inches, grid paper).**
4: 468A-468B, 468-473
- **Compare area measurements made using different units (e.g., square inches vs. square centimeters).**
4: 468A-468B, 468-473

1.2.3 Apply appropriate tools to measure area using both standard and metric systems.

- **Select an appropriate tool with which to measure and justify the choice. [SP, CU, MC]**
4: 468A-468B, 468-473
- **Name and use appropriate tools for measuring area.**
4: 468A-468B, 468-473

Procedures, Precision, and Estimation

1.2.4 Apply the measurement procedure to measure area.

- **Determine the appropriate unit to measure the area.**
4: 468A-468B, 468-473
- **Select an appropriate tool according to the unit chosen.**
4: 468A-468B, 468-473
- **Compare the object being measured with the units on the tools and record and label the units.**
4: 468A-468B, 468-473

1.2.6 Understand when approximate measurements are sufficient and apply estimation strategies to obtain reasonable measurements of area.

- **Identify situations when approximate measurements are sufficient.**
4: 665
- **Estimate a measurement using standard or nonstandard units (e.g., tiles, square feet, note cards). [SP]**
4: 665
- **Recognize when a measurement is approximate rather than exact. [RL]**
4: 665
- **Use estimation to justify reasonableness of a measurement (e.g., estimate length and width of a playground by pacing it off). [RL]**
4: 665

Component 1.3: Understand and apply concepts and procedures from geometric sense.
--

Properties and Relationships**1.3.1 Understand the concept of parallel and perpendicular lines and line symmetry in 2-D shapes and figures.**

- **Identify symmetrical 2-D shapes and figures. [CU]**
4: 456A-456B, 456-457
- **Complete a picture or design over a line of symmetry.**
4: 456A-456B, 456-457
- **Identify and draw a line of symmetry (e.g., folding or using a mirror). [CU]**
4: 456A-456B, 456-457
- **Identify parallel and perpendicular lines in 2-D shapes and figures.**
4: 440A-440B, 440-443
- **Describe attributes of 2-D geometric figures using appropriate vocabulary (e.g., parallel, perpendicular, symmetric). [MC, CU]**
4: 434A-434B, 434-437, 438A-438B, 438-439, 440A-440B, 440-443, 444A-444B, 444-447, 448A-448B, 448-449

- **Given attributes of parallel, perpendicular, and symmetrical, identify appropriate 2-D shapes (e.g., All my sides are parallel and my angles are perpendicular. What am I?). [RL, CU]**
4: 438A-438B, 438-439, 444A-444B, 444-447

1.3.2 Apply understanding of congruence to identify, name, compare, and sort 2-D shapes and figures in multiple orientations.

- **Identify, describe, and compare attributes of congruent figures in multiple orientations. [CU, SR]**
4: 452A-452B, 452-455
- **Build and draw congruent figures. [CU]**
4: 452A-452B, 452-455
- **Identify, name, compare and sort congruent 2-D shapes and figures in multiple orientations.**
4: 452A-452B, 452-455

1.3.3 Understand location of points on a map or coordinate grid in the first quadrant.

- **Describe the location in the first quadrant on a coordinate grid in terms of horizontal and vertical position (e.g., over and up). [CU, RL]**
4: 212A-212B, 212-215
- **Plot a given set of ordered pairs in the first quadrant of a coordinate grid.**
4: 212A-212B, 212-215
- **Give directions from one location to another using ordered pairs in the first quadrant of a coordinate grid (e.g., given a state map, specify location of landmarks). [RL, CU, MC]**
4: related material: 212A-212B, 212-215

1.3.4 Understand the concepts of translation (slide) and reflection (flip).

- **Simulate translations and reflections using objects (e.g., pattern blocks, geoblocks). [MC]**
4: 452A-452B, 452-455
- **Record results of a translation and reflections (e.g., plot a set of ordered pairs creating a polygon, translate and reflect it, and list the new ordered pairs). [RL, CU]**
4: 452A-452B, 452-455

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Probability

1.4.1 Understand when events are certain, impossible, and more, less, or equally likely.

- **Identify the likelihood of events and use the vocabulary of probability (e.g., likely, unlikely, certain, impossible).**
4: 700A-700B, 700-703, 706A-706B, 706-709
- **Place events in order of likelihood of occurrence (e.g., use a probability number line). [SP, RL, MC]**
4: 700A-700B, 700-703, 706A-706B, 706-709

Statistics

1.4.4 Understand and apply mode, median, and range to describe a set of data.

- **Find the mode of a data set.**
4: 226A-226B, 226-229
- **Use a variety of strategies to determine median and range from a set of data (e.g., use a graph, pictures or objects).**
4: 226A-226B, 226-229
- **Calculate the range of a data set.**
4: 226A-226B, 226-229
- **Compare the mode and median from a set of data and determine which measure better describes the average. [RL]**
4: 226A-226B, 226-229

1.4.5 Understand how to create appropriate questions and collect data to obtain the desired information.

- **Formulate questions for surveys and collect data. [SP, CU]**
4: 230A-230B, 230-231
- **For a given question decide whether to conduct a survey, use observations or measure. [SP, RL]**
4: 230A-230B, 230-231

- **Make a plan to answer a question including how to record and organize data. [SP, CU, MC]**
4: 230A-230B, 230-231

1.4.6 Analyze and evaluate data appropriate to the grade level.

- **Compare mode, median, and range for two or more sets of data.**
4: 226A-226B, 226-229
- **Analyze the distribution of data (e.g., given unlabeled graphs and data sets, match the appropriate data to a graph). [SP, RL]**
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221
- **Make inferences based on a set of data.**
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221
- **Judge the appropriateness of inferences made from a set of data and support the judgment. [CU, MC]**
4: 204A-204B, 204-205, 206A-206B, 206-207, 208A-208B, 208-211, 216A-216B, 216-221

Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns and Representations

1.5.1 Understand and apply rules for number patterns based on a single arithmetic operation.

- **Extend and represent patterns using words, tables, numbers, and pictures. [RL]**
4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641
- **Create a number pattern and explain what makes it a pattern. [CU]**
4: 10A-10B, 10-11, 90A-90B, 90-91, 366A-366B, 366-367, 641
- **Describe the rules for a pattern based on one operation (e.g., add 4, multiply by 2). [CU]**
4: 164A-164B, 164-165

Symbols and Representations**1.5.2 Understand and apply rules for number patterns based on a single arithmetic operation.**

- Translate problem-solving situations to expressions and equations involving multiplication or division using appropriate symbols and notations. [SP, CU]
4: 94A-94B, 94-95, 690A-690B, 690-691
- Compare multiplication or division number sentences using the symbols $>$, $<$, and $=$ (e.g., $5 \times 3 > 3 \times 2$).
4: 688, 689
- Select operational and relational symbols to make a multiplication or division number sentence true (e.g., $4 _ 3 = 12$; $5 \times 12 _ 64$).
4: 690A-690B, 690-691

Evaluating and Solving**1.5.3 Understand and apply the procedures for evaluating and solving one-step equations with arithmetic operations.**

- Substitute a symbol for a numeric value in an expression or in equations (e.g., $X = 7$, find $X + 3$; If $H = 12$ and $\tau = 36$, what is $H + \tau$?).
4: 100A-100B, 100-101, 692A-692B, 692-695
- Solve missing factor equations (e.g., $\theta \times 3 = 12$).
4: 100A-100B, 100-101, 692A-692B, 692-695

EALR 2: The student uses mathematical reasoning to define and solve problems.

Component 2.1: Investigate and Analyze Situations
--

2.1.1 Analyze situations to determine known and unknown information in familiar situations.

- 4: 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

2.1.2 Analyze situations to determine when information is missing or extraneous.**4:** 696A-696B, 696-697**Component 2.2: Formulate Questions and Define the Problem****2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and statistics.****4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512A-512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717**2.2.2 Generate questions to be answered in familiar situations.****4:** 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703**Component 2.3: Construct Solutions****2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and statistics to construct a solution.****4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 40-41, 90A-90B, 90-91, 94A-94B, 94-95, 102-103, 140A-140B, 140-143, 156A-156B, 156-157, 168-169, 198A-198B, 198-199, 222A-222B, 222-223, 234-235, 278A-278B, 278-281, 290A-290B, 290-291, 292-293, 326A-326B, 326-329, 342A-342B, 342-343, 344-345, 384A-384B, 384-385, 396A-396B, 396-399, 412-413, 460A-460B, 460-461, 474A-474B, 474-477, 478-479, 512A-512B, 512-513, 538A-538B, 538-539, 540-541, 584A-584B, 584-858, 600A-600B, 600-601, 602-603, 648A-648B, 648-649, 662A-662B, 662-663, 666-667, 696A-696B, 696-697, 714A-714B, 714-715, 716-717**Component 2.4: Draw Conclusions****2.4.1 Understand how to make conjectures and support them with evidence.****4:** 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

4: 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

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

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information**3.1.1 Apply a simple plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or statistics.**

4: 230A-230B, 230-231

3.1.2 Analyze mathematical information for a given purpose requiring number sense, measurement, geometric sense, or statistics, from one or two different sources using reading, listening, and observation.

4: 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

Component 3.2: Organize and Interpret Information**3.2.1 Understand how to organize and interpret numerical, measurement, geometric or statistical information for a given purpose in at least one way (reflecting, verbalizing, discussing, or writing).**

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

Component 3.3: Represent and Share Information**3.3.1 Understand how to express ideas involving number sense, measurement, geometric sense, or statistics, using mathematical language and notation.**

4: 48-49, 110-111, 176-177, 242-243, 300-301, 352-353, 420-421, 486-487, 548-549, 610-611, 674-675, 724-725

3.3.2 Understand how to represent numerical, measurement, geometric, or statistical ideas and information to familiar people for a real-world purpose.

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics**4.1.1 Apply concepts and procedures from two of the content strands (number sense, measurement, geometric sense, or statistics) in a given problem or situation.**

4: 12A-12B, 12-13, 24A-24B, 24-25, 38A-38B, 38-39, 90A-90B, 90-91, 94A-94B, 94-95, 140A-140B, 140-143, 156A-156B, 156-157, 198A-198B, 198-199, 222A-222B, 222-223, 278A-278B, 278-281, 290A-290B, 290-291, 326A-326B, 326-329, 342A-342B, 342-343, 384A-384B, 384-385, 396A-396B, 396-399, 460A-460B, 460-461, 474A-474B, 474-477, 512-A512B, 512-513, 538A-538B, 538-539, 584A-584B, 584-858, 600A-600B, 600-601, 648A-648B, 648-649, 662A-662B, 662-663, 696A-696B, 696-697, 714A-714B, 714-715

4.1.2 Analyze mathematical models and representations to determine equivalence in familiar situations from number sense, measurement, geometric sense, or statistics.

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

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines**4.2.1 Analyze the concepts, strategies, and procedures from other disciplines to recognize mathematical patterns and concepts in familiar situations.**

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

4.2.2 Apply mathematical thinking and modeling in other disciplines.

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

4: 79, 195, 458, 501, 532

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations**4.3.1 Understand how mathematics is used in everyday life.**

4: 19, 67, 163, 215, 273, 335, 383, 447, 507, 571, 627, 703

4.3.2 Understand how mathematics is used in career settings.

4: 84, 97, 212, 258, 280, 328, 412, 570, 640

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade Five

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand the concepts of fractions and decimals.

- **Create a model when given a symbolic representation and/or write the fraction when given a model (e.g., number line).**
5: 394A-394B, 394-397
- **Explain the value of a given digit in a decimal to at least the thousandths place.**
5: 8A-8B, 8-11
- **Explain how the value of a fraction changes in relationship to the size of the whole (e.g., half a pizza vs. half a cookie) [CU]**
5: 394A-394B, 394-397

1.1.2 Understand the relative values of non-negative fractions and decimals.

- **Compare, order, and/or illustrate whole numbers, decimals, and fractions using concrete models (e.g., number line or shaded grid) or implementing strategies (e.g., like denominators, benchmarks, conversions). [SP, CU, MC]**
5: 6A-6B, 6-7, 12A-12B, 12-13, 418A-418B, 418-419, 420A-420B, 420-423, 430A-430B, 430-433
- **Determine equivalence among fractions.**
5: 410A-410B, 410-411, 412A-412B, 412-413

1.1.3 Understand and apply the concepts of factors, multiples, prime, and composite numbers.

- **Illustrate prime and/or composite numbers by creating a physical model (e.g., arrays, area models).**
5: 164A-164B, 164-167

- **Identify the prime numbers from 1-50 and explain why the number is prime or composite. [CU]**
5: 164A-164B, 164-167
- **Find the least common multiple and greatest common factor of two numbers.**
5: 414A-414B, 414-415, 464A-464B, 464-465
- **Solve problems in a variety of situations (e.g., find a mystery number, find unit pricing, increase or decrease a recipe, find the portions for a group characteristics of numbers [SP, MC]**
5: 164A-164B, 164-167, 414A-414B, 414-415, 464A-464B, 464-465

Computation

1.1.5 Understand the meaning of addition and subtraction of non-negative decimals and simple fractions.

- **Explain meaning of adding and subtracting simple fractions and decimals using visual and physical models. [CU]**
5: 38A-38B, 38-39, 40A-40B, 40-41, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483
- **Create a problem situation involving addition and/or subtraction of non-negative decimals or simple fractions. [SP, CU, RL, MC]**
5: 38A-38B, 38-39, 40A-40B, 40-41, 460A-460B, 460-461, 464A-464B, 464-465, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

1.1.6 Understand and apply procedures for addition and subtraction on non-negative decimals and like-denominator fractions with fluency.

- **Find the sums and differences of decimals or simple fractions.**
5: 38A-38B, 38-39, 40A-40B, 40-41, 460A-460B, 460-461, 464A-464B, 464-465, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483
- **Write and solve problem situations to find sums and/or differences of decimals or like-denominator fractions. [SP, RL, CU, MC]**
5: 38A-38B, 38-39, 40A-40B, 40-41, 460A-460B, 460-461, 464A-464B, 464-465, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

1.1.7 Apply strategies for mental arithmetic, pencil and paper, or calculator as appropriate to the task involving non-negative decimals and simple fractions.

- **Select and justify appropriate strategies and tools from among mental computation, estimation, calculators, and paper and pencil to compute a problem situation.**
5: 38A-38B, 38-39, 40A-40B, 40-41, 460A-460B, 460-461, 462A-462B, 462-463, 464A-464B, 464-465, 466A-466B, 466-469, 472A-472B, 472-473, 474A-474B, 474-475, 476A-476B, 476-477, 478A-478B, 478-483

Estimation**1.1.8 Understand situations in which estimation is appropriate and apply estimation strategies to determine the reasonableness of answers involving addition and subtraction on non-negative decimals and like-denominator fractions.**

- **Use estimation strategies prior to computation of addition and subtraction of decimals and like-denominator fractions to determine reasonableness of answers.**
5: 28A-28B, 28-31, 460A-460B, 460-461
- **Use estimation to predict or check answers.**
5: 28A-28B, 28-31, 460A-460B, 460-461
- **Identify appropriate estimated answers for a given situation.**
5: 28A-28B, 28-31, 460A-460B, 460-461
- **Articulate various strategies used during estimation. [CU]**
5: 28A-28B, 28-31, 460A-460B, 460-461

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes, Units, and Tools**1.2.1 Understand the attributes of angles.**

- **Describe and compare angles in a variety of objects.**
5: 332A-332B, 332-335
- **Recognize angles in the environment.**
5: 332A-332B, 332-335

- **Classify angles as right, acute or obtuse.**
5: 332A-332B, 332-335

- **Identify types of angles in polygons. [MC]**
5: 340A-340B, 340-341

1.2.2 Understand and apply standard units to measure the attribute of angles.

- **Read degrees on a protractor (e.g., simulate a protractor with a paper plate, note cards).**
5: 332A-332B, 332-335

1.2.3 Apply appropriate tools to measure angles.

- **Measure angles using a protractor and label appropriately. [SP, CU]**
5: 332A-332B, 332-335

Procedures, Precision, and Estimation

1.2.4 Apply the measurement procedure to measure angles.

- **Determine the appropriate unit to measure angles.**
5: 332A-332B, 332-335
- **Select an appropriate tool according to the unit chosen.**
5: 332A-332B, 332-335
- **Compare the object being measured with the units on the tools and record and label the units.**
5: 332A-332B, 332-335

1.2.5 Understand that measurement is approximate.

- **Explain why different tools/people/objects result in different measurements (e.g., different students all measure an object, but come up with different measurements; using a 12-inch ruler vs. a yard stick). [RL, CU]**
5: 528A-528B, 528-531, 532A-532B, 532-533

1.2.6 Understand when approximate measurements are sufficient and apply estimation strategies to obtain reasonable measurements of angles.

- **Identify situations when approximate measurements are sufficient.**
5: 528A-528B, 528-531, 532A-532B, 532-533

- **Recognize when a measurement is approximate rather than exact. [SP]**
5: 528A-528B, 528-531, 532A-532B, 532-533
- **Use estimation to justify reasonableness of a measurement. [RL]**
5: 528A-528B, 528-531, 532A-532B, 532-533
- **Estimate a measurement using standard or nonstandard units. [SP]**
5: 528A-528B, 528-531, 532A-532B, 532-533

Component 1.3: Understand and apply concepts and procedures from geometric sense.

Properties and Relationships

1.3.1 Understand the properties of 3-D figures and the relationships among 2-D and 3-D figures.

- **Name and sort 3-D solids according to their attributes (faces, edges, vertices, base, parallel faces).**
5: 594A-594B, 594-597
- **Combine regular polygons to create given 2-D shapes and represent them on grid paper (e.g., use all pieces of tangrams to create a square). [SP, RL, CU]**
5: 598A-598B, 598-601
- **Create 3-D shapes from 2-D figures (e.g., cylinder from two circles and a rectangle) and explain the relationship. [MC]**
5: 598A-598B, 598-601
- **Create a 3-D shape given its net and draw the net of a given 3-D shape. [RL, MC]**
5: 598A-598B, 598-601
- **Given a variety of figures, sort according to specific attributes (e.g., parallel, perpendicular, lines of symmetry). [CU, MC, RL]**
5: 594A-594B, 594-597

1.3.2 Apply understanding of the properties of parallel and perpendicular lines and line symmetry to identify, name, compare, and sort 2-D shapes and figures.

- **Identify, name, compare and sort parallel and perpendicular lines in 2-D shapes and figures.**
5: 328A-328B, 328-331
- **Draw plane figures with parallel and perpendicular lines and explain the attributes. [CU, RL]**
5: 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351
- **Draw and label a design that includes a given set of attributes. [CU, RL]**
5: 340A-340B, 340-341, 342A-342B, 342-345, 346A-346B, 346-351
- **Compare and contrast figures with and without line symmetry. [CU, RL]**
5: 368A-368B, 368-371
- **Identify places in the environment where parallel and perpendicular lines occur. [MC]**
5: 328A-328B, 328-331

1.3.3 Understand location of fractions and decimals on a positive number line.

- **Use a number line to order fractions or decimals from least to greatest (e.g., not limited to a number line marked 0-1).**
5: 12A-12B, 12-13, 420A-420B, 420-423

1.3.4 Apply understanding of single transformations (translations and reflections) to draw congruent shapes and figures in multiple orientations.

- **Identify a specific transformation as a translation (slide) or reflection (flip).**
5: 364A-364B, 364-367
- **Given a shape on a grid, perform and draw one or more transformations. [RL]**
5: 364A-364B, 364-367
- **Transform congruent shapes and figures in multiple orientations.**
5: 364A-364B, 364-367

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Probability

1.4.1 Understand the likelihood (chance) of simple events.

- **Consider how likely it is that an event will occur (e.g., spinner, coin, dice).**
5: 296A-296B, 296-299

- **Represent the probability of a simple event on a scale of 0 to 1. [MC]**
5: 302A-302B, 302-305
- **Given a fair game, create an advantage for one of the players. [SP, RL]**
5: 206-299

Statistics

1.4.3 Understand how to organize, display, and interpret data in text, histograms, pictographs, and stem-and-leaf plots, and interpret circle graphs

- **Use histograms, pictographs, and stem-and-leaf plots to display data. [CU, MC]**
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275
- **Construct assorted graphs including labels, appropriate scale, and key. [CU]**
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275
- **Explain data from given circle graphs. [RL, CU]**
5: 286A-286B, 286-287

1.4.4 Understand and apply the mean from a set of data.

- **Find the mean from a given set of data using models and formulas.**
5: 282A-282B, 282-285
- **Use models to represent the mean for a set of data.**
5: 282A-282B, 282-285

1.4.5 Understand how different collection methods or different questions can support a point of view.

- **Ask the same question using different data collection methods that result in different points of view being supported. [RL]**
5: 288A-288B, 288-291
- **With a given question, explain how different data collection methods affect the nature of the data set (e.g., phone survey, internet search, person-to-person survey). [CU]**
5: 288A-288B, 288-291

1.4.6 Analyze and evaluate data appropriate to the grade level.

- **Propose and justify conclusions and predictions based on data. [CU, RL]**
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275
- **Formulate questions to extend conclusions or verify predictions (e.g., Given that dogs are bigger than cats, do dogs eat more than cats?). [SP, RL]**
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275
- **Judge the appropriateness of inferences made from a set of data and support the judgment. [CU, MC]**
5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287

Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns and Relationships**1.5.1 Understand the relationships between two related sets of numbers based on one or two arithmetic operations.**

- **Create, explain, and/or extend number patterns involving two related sets of numbers (e.g., add a missing element in the beginning, middle or end of an in-out chart). [CU]**
5: 14A-14B, 14-17, 66A-66B, 66-67, 84A-84B, 84-85, 106A-106B, 106-107, 136A-136B, 136-137, 728A-728B, 728-729
- **Use appropriate vocabulary to represent, extend and describe patterns using in-out tables (e.g., pattern, rule, sequence). [CU]**
5: 106A-106B, 106-107, 728A-728B, 728-729

Symbols and Representations**1.5.2 Understand and apply tables, equations, or simple expressions to represent situations involving two arithmetic operations.**

- **Represent situations involving two arithmetic operations using symbols, words, pictures, and notations. [CU, RL]**
5: 226A-226B, 226-227
- **Translate between different representations (words, symbols, and pictures) of simple quantitative situations. [MC]**
5: 104A-104B, 104-105, 706A-706B, 706-709

- **Represent and describe patterns using tables and graphs (e.g., interval, rule, and sequence). [CU]**
5: 106A-106B, 106-107, 728A-728B, 728-729

Evaluating and Solving

1.5.3 Understand and apply the procedures for evaluating and solving simple expressions and one-step equations that include adding and subtracting positive decimals and like-denominator fractions.

- **Solve one-step single variable equations (e.g., $x + 3 = 9$).**
5: 108A-108B, 108-109, 700A-700B, 700-701, 702A-702B, 702-705
- **Solve real-world situations involving simple, single variable equations. [SP, CU]**
5: 109, 701, 705

EALR 2: The student uses mathematical reasoning to define and solve problems.

Component 2.1: Investigate and Analyze Situations

2.1.1 Analyze situations to determine known and unknown information in new situations.

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

2.1.2 Analyze situations to determine when information is missing or extraneous.

5: 406A-406B, 306-307

Component 2.2: Formulate Questions and Define the Problem**2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and probability and statistics.**

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

2.2.2 Generate questions to be answered in new situations.

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

Component 2.3: Construct Solutions**2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and probability and statistics to construct a solution.**

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

Component 2.4: Draw Conclusions**2.4.1 Understand how to make conjectures and support or contradict them with evidence.**

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

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

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

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.**Component 3.1: Gather Information****3.1.1 Apply a plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or probability and statistics.**

5: 32A-32B, 32-33, 42A-42B, 42-43, 44-45, 80A-80B, 80-81, 104A-104B, 104-105, 110-111, 144A-144B, 144-145, 168A-168B, 168-169, 180-181, 210A-210B, 210-211, 226A-226B, 226-227, 238-239, 276A-276B, 276-279, 272A-272B, 272-273, 306-307, 352A-352B, 352-355, 356A-356B, 356-357, 372-373, 406A-406B, 406-407, 434A-434B, 434-437, 438-439, 484A-484B, 484-487, 504A-504B, 504-505, 506-507, 558A-558B, 558-559, 570A-570B, 570-571, 572-573, 606A-606B, 606-607, 624A-624B, 624-625, 626-627, 660A-660B, 660-661, 664A-664B, 664-665, 676-677, 706A-706B, 706-709, 720A-720B, 720-721, 730-731

3.1.2 Analyze mathematical information for a given purpose, requiring number sense, measurement, geometric sense, or probability and statistics from multiple sources using reading, listening, and observation.

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

Component 3.2: Organize and Interpret Information**3.2.1 Understand how to organize and interpret information for a given purpose (reflecting, verbalizing, discussing, and writing).**

5: 292A-292B, 292-293, 356A-356B, 356-357, 570A-570B, 570-571, 664A-664B, 664-665, 720A-720B, 720-721

Component 3.3: Represent and Share Information**3.3.1 Understand how to express and present ideas using mathematical language and notation.**

5: 52-53, 118-119, 188-189, 246-247, 314-315, 380-381, 446-447, 514-515, 580-581, 634-635, 684-685, 738-739

3.3.2 Understand how to represent ideas and information from number sense, measurement, geometric sense, and probability and statistics in ways appropriate to audience and purpose.

5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics**4.1.1 Apply concepts and procedures from a variety of content strands (number sense, measurement, geometric sense, and probability and statistics) in a given problem or situation.**

5: 70A-70B, 70-71, 100A-100B, 100-103, 104A-104B, 104-105, 106A-106B, 106-107, 108A-108B, 108-109, 172A-172B, 172-173, 174A-174B, 174-175, 176A-176B, 176-177, 542A-542B, 542-545, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557, 610A-610B, 610-613, 696A-696B, 696-699, 700A-700B, 700-701, 702A-702B, 702-705, 706A-706B, 706-709, 712A-712B, 712-115, 716A-716B, 716-717, 718A-718B, 718-719, 724A-724B, 724-727, 728A-728B, 728-729

4.1.2 Analyze relationships between equivalent mathematical models and representations.

5: 262A-262B, 262-265, 266A-266B, 266-269, 270A-270B, 270-275, 286A-286B, 286-287, 548A-548B, 548-549, 550A-550B, 550-551, 552A-552B, 552-553, 554A-554B, 554-557

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines**4.2.1 Analyze the concepts, strategies, and procedures from other disciplines.**

5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

4.2.2 Apply mathematical thinking and modeling in other disciplines.

5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.

5: 8, 10, 166

Component 4.3: Relate Mathematical Concepts and Procedures to Real-World Situations
--

4.3.1 Understand the extensive uses of mathematics outside the classroom.

5: 31, 97, 155, 221, 285, 345, 429, 499, 545, 597, 675, 727

4.3.2 Understand how mathematics is used in several occupations/careers of interest.

5: 19

**Scott Foresman – Addison Wesley Mathematics
to the
Washington Grade Level Content Expectations—EALR’s**

Grade Six

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

Component 1.1: Understand and apply concepts and procedures from number sense - number, numeration, computation, and estimation.

Number and Numeration

1.1.1 Understand the concepts of integers.

- **Illustrate integer values using models and pictures (e.g., temperature, elevators, net worth/debt, riding a bus or subway).**
6: 408A-408B, 408-409
- **Represent and identify integers on a number line.**
6: 410A-410B, 410-411

1.1.2 Understand the relative values of integers and non-negative rational numbers.

- **Compare different representations of non-negative rational numbers by implementing strategies (e.g., like denominators, benchmark fractions). [SP, CU, MC]**
6: 172A-172B, 172-175, 176A-176B, 176-179, 358A-358B, 358-361
- **Identify equivalence between common fractions and decimals. [MC]**
6: 172A-172B, 172-175
- **Compare integer values and explain which is greater and why. [RL, CU]**
6: 410A-410B, 410-411

1.1.3 Understand the additive inverse property.

- **Illustrate the additive inverse property using physical models and pictures. [CU]**
6: 48A-48B, 48-51

- **Explain the additive inverse property and why it works. [CU]**
6: 48A-48B, 48-51

1.1.4 Understand the concepts of ratio and percent.

- **Write ratios and proportions in part/part and part/whole relationships using objects, pictures, and symbols (e.g., using /, :, or to as representations for ratios). [CU]**
6: 300A-300B, 300-301, 302A-302B, 302-305, 316A-316B, 316-317, 318A-318B, 318-321, 322A-322B, 322-323
- **Represent equivalent ratios using objects, pictures, and symbols. [CU, MC]**
6: 302A-302B, 302-305
- **Identify percent as 100 equal size sets (e.g., 1% of 200 items is 2 items). [RL]**
6: 354A-354B, 354-357
- **Represent a given percentage with a physical model. [CU]**
6: 354A-354B, 354-357
- **Find a percentage of a given set of items other than 100.**
6: 366A-366B, 366-367, 370A-370B, 370-373

Computation

1.1.5 Understand the meaning of addition and subtraction of integers and multiplication and division on non-negative rational numbers.

- **Explain meaning of multiplying and dividing non-negative common fractions and decimals using visual and physical models. [CU]**
6: 90-93, 94A-94B, 94-97, 100A-100B, 100-103, 248A-248B, 248-251, 252A-252B, 252-255, 258A-258B, 258-259, 266A-266B, 266-267, 270A-270B, 270-271
- **Explain the meaning of addition and subtraction of integers using models (e.g., reducing debt, temperature increase or decrease, yards gained and lost). [CU]**
6: 418A-418B, 418-421, 422A-422B, 422-425

1.1.6 Understand and apply procedures for addition and subtraction on non-negative decimals and fractions with fluency.

- **Find the sums and/or differences of common fractions and decimals.**
6: 86A-86B, 86-89, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223

- **Write and solve problem situations to find sums and/or differences of decimals or fractions. [SP, RL, CU, MC]**
6: 86A-86B, 86-89, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223
- 1.1.7 Apply strategies for mental arithmetic, pencil and paper, or calculator as appropriate to the task involving non-negative decimals and simple fractions.**
- **This indicator should be incorporated in all instruction and applies to all grade levels.**
6: 86A-86B, 86-89, 204-205, 206A-206B, 206-211, 218A-218B, 218-219, 220A-220B, 220-223

Estimation

1.1.8 Understand situations in which estimation is appropriate and apply estimation strategies to determine the reasonableness of answers involving content appropriate to the grade level.

- **Apply estimation strategies prior to computation of whole numbers, decimals, and common fractions to determine reasonableness of answers.**
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369
- **Use estimation to predict or check answers.**
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369
- **Identify appropriate estimated answers for a given situation.**
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369
- **Articulate various strategies used during estimation. [CU]**
6: 16A-16B, 16-17, 18A-18B, 18-19, 216A-216B, 216-217, 256A-256B, 256-257, 368A-368B, 368-369

Component 1.2: Understand and apply concepts and procedures from measurement.
--

Attributes, Units, and Tools

1.2.1 Understand the attributes of volume and capacity.

- **Given two rectangular solids, compare their volume.**
6: 594A-594B, 594-597

- **Compare the relative capacity of two containers (e.g., paper cylinders formed horizontally and vertically and filled with popcorn). [SP, CU, MC]**
6: 542A-542B, 542-545, 546A-546B, 546-549

1.2.2: Understand and apply standard units to measure the attributes of volume and capacity.

- **Identify cubic units to measure volume (e.g., linking cubes, cubic centimeter).**
6: 594A-594B, 594-597
- **Identify and read incremental units for capacity (e.g., milliliters, cups, ounces).**
6: 542A-542B, 542-545, 546A-546B, 546-549

1.2.3 Apply appropriate tools to measure volume/capacity using both standard and metric systems.

- **Measure volume of rectangular prisms and label appropriately (e.g., cubic units). [SP, CU]**
6: 594A-594B, 594-597
- **Measure the capacity of containers using appropriate tools and label (e.g., graduated cylinders, measuring cups, tablespoons). [SP, CU]**
6: 542A-542B, 542-545, 546A-546B, 546-549

Procedures, Precision, and Estimation

1.2.5 Understand that precision is related to the size of the unit of the measurement used.

- **Compare the appropriateness of standard to nonstandard units in measuring volume or capacity. [CU]**
6: 542A-542B, 542-545, 546A-546B, 546-549, 594A-594B, 594-597
- **Choose the appropriate standard unit for measuring volume or capacity (e.g., cubic inches vs. cubic feet, cups vs. gallons). [SP]**
6: 542A-542B, 542-545, 546A-546B, 546-549, 594A-594B, 594-597

1.2.6 Understand when approximate measurements are sufficient and apply estimation strategies to obtain reasonable measurements of volume.

- **Identify situations when approximate measurements are sufficient.**
6: 594A-594B, 594-597

- **Recognize when a measurement is approximate rather than exact. [SP]**
6: 550A-550B, 550-551
- **Use estimation to justify reasonableness of a measurement. [RL, CU]**
6: 550A-550B, 550-551
- **Estimate a measurement using standard or nonstandard units. [SP]**
6: 550A-550B, 550-551

Component 1.3: Understand and apply concepts and procedures from geometric sense.

Properties and Relationships

1.3.1 Understand properties of angles, triangles, and quadrilaterals.

- **Explain the difference between a regular and irregular polygon. [CU, RL]**
6: 494A-494B, 494-495
- **Identify, sort, classify, and explain the properties of specific quadrilaterals including squares, rectangles, parallelograms, and trapezoids based on attributes. [CU, RL]**
6: 500A-500B, 500-501
- **Identify angles as acute, right, obtuse, or straight.**
6: 476A-476B, 476-479
- **Classify triangles as right, equilateral, isosceles, and/or scalene.**
6: 476A-476B, 476-479

1.3.2 Apply understanding of the properties of 3-D figures and shapes.

- **Identify, name, compare, and sort 3-D shapes and figures.**
6: 586A-586B, 586-589
- **Identify geometric figures and concepts in nature and art (e.g. triangle in architecture).**
6: 479, 557
- **Given two 3-D solids, explain how they are alike and different in terms of their attributes (e.g., using a Venn diagram). [RL, CU]**
6: 586A-586B, 586-589

1.3.3 Understand the relative location of integers on a number line.

- **Show the order of a given set of integers on a number line with both positive and negative numbers.**
6: 410A-410B, 410-411
- **Given directions for movement on a number line, including positive and negative numbers (vertical and horizontal), identify the point of final destination (e.g., temperature variation at different times of the day, bank accounts, gain and loss of weight). [MC]**
6: 410A-410B, 410-411
- **Determine the distance between any two integers on a number line.**
6: 410A-410B, 410-411

1.3.4 Understand and analyze rotations (turns) of a 2-D figure about the center of the figure.

- **Create a design using rotational symmetry of a shape. [MC]**
6: 510A-510B, 510-511, 516A-516B, 516-519
- **Match a figure with its image following one transformation. [RL]**
6: 510A-510B, 510-511, 516A-516B, 516-519

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Probability**1.4.1 Understand probability as a ratio between and including zero and one.**

- **Calculate probability for a simple event.**
6: 662A-662B, 662-663, 664A-664B, 664-667
- **Express probability as a ratio, decimal, and percent.**
6: 662A-662B, 662-663, 664A-664B, 664-667

1.4.2 Understand the procedures for determining all possible outcomes of simple experiments.

- **Represent and interpret all possible outcomes of simple experiments (e.g., an organized list, a table, or a tree diagram). [RL, CU]**
6: 654A-654B, 654-657, 658A-658B, 658-661, 662A-662B, 662-663, 664A-664B, 664-667

Statistics**1.4.4 Apply measures of central tendency to interpret a set of data.**

- **Determine when it is appropriate to use mean, median, or mode. [RL]**
6: 624A-624B, 624-627
- **Use mean, median, and mode to explain familiar situations (e.g., the heights of students in the class, the hair color of students in the class). [CU, RL, MC]**
6: 624A-624B, 624-627

1.4.5 Understand how to evaluate a question or data collection method for fairness.

- **Compare data collection methods for a given situation to determine fairness of the method (e.g., compare a phone survey, a web survey, and a personal interview survey). [RL, MC]**
6: 620A-620B, 620-623
- **Judge a data collection method to consider limitations that could affect interpretations (e.g., to examine battery life, compare how long batteries last in a flashlight vs. a portable CD player). [SP, RL, MC]**
6: 620A-620B, 620-623

1.4.6 Analyze and evaluate data appropriate to the grade level.

- **Make a conjecture about an entire group or population from a sample (e.g., sample the classroom to find the favorite school lunch). [MC, CU, RL]**
6: 620A-620B, 620-623
- **Evaluate and explain conclusions drawn from data (e.g., from newspapers or web sites). [RL, MC, SP]**
6: 620A-620B, 620-623, 650A-650B, 650-651

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

Patterns and Relationships**1.5.1 Understand and apply rules for generating number patterns based on two arithmetic operations.**

- **Create, explain, and/or extend number patterns involving two related sets of numbers and two operations, including addition, subtraction, multiplication, and/or division. [CU]**
6: 212A-212B, 212-213, 444A-444B, 444-447
- **Use rules for generating number patterns (e.g., Fibonacci sequence, bouncing ball) to model real-life situations. [MC]**
6: 212A-212B, 212-213, 444A-444B, 444-447
- **Predict a future element in a simple relation (e.g., find the fifteenth term).**
6: 212A-212B, 212-213, 444A-444B, 444-447
- **Identify patterns involving combinations of operations in the rule, including simple exponents (e.g., 2, 5, 11, 23).**
6: 444A-444B, 444-447, 448A-448B, 448-449

Symbols and Representations

1.5.2 Understand situations involving multiple arithmetic operations.

- **Represent and evaluate algebraic expressions involving a single variable.**
6: 40A-40B, 40-43
- **Translate a situation involving multiple arithmetic operations into algebraic form using equations, tables, and graphs.**
6: 116A-116B, 116-119, 710A-710B, 710-711
- **Identify or describe a situation which may be modeled by a graph. [CU, SP]**
6: 698A-698B, 698-699, 718A-718B, 718-721
- **Represent an equation or expression using a variable in place of an unknown number.**
6: 116A-116B, 116-119, 710A-710B, 710-711

Evaluating and Solving

1.5.3 Understand and apply the procedures for solving two-step equations with one variable that include adding and subtracting positive rational numbers.

- **Express relationships between non-negative rational numbers using symbols.**
6: 712A-712B, 712-715, 716A-716B, 716-717, 718A-718B, 718-721
- **Evaluate an expression by substituting values for variables (e.g., $3y + 2$, for $y=3$).**
6: 712A-712B, 712-715, 716A-716B, 716-717, 718A-718B, 718-721

EALR 2: The student uses mathematical reasoning to define and solve problems.**Component 2.1: Investigate and Analyze Situations****2.1.1 Analyze situations to determine known and unknown information in new situations.**

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

2.1.2 Analyze situations to determine when information is missing or extraneous.

6: 582A-582B, 582-583

Component 2.2: Formulate Questions and Define the Problem**2.2.1 Understand the problem to be solved involving number sense, measurement, geometric sense, and probability and statistics.**

6: 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

2.2.2 Generate questions to be answered in new situations.

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

Component 2.3: Construct Solutions

2.3.1 Apply a variety of strategies and approaches to problem situations from number sense, measurement, geometric sense, and probability and statistics to construct a solution.

6: 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

Component 2.4: Draw Conclusions

2.4.1 Understand how to make conjectures and support or contradict them with evidence.

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

2.4.2 Analyze solutions to draw conclusions and support them with evidence.

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

Component 2.5: Evaluate and Verify Results**2.5.1 Evaluate strategies and procedures for accuracy and appropriateness.**

6: 20A-20B, 20-21, 36A-36B, 36-37, 52A-52B, 52-53, 54-55, 98A-98B, 98-99, 116A-116B, 116-119, 120-121, 156A-156B, 156-157, 180A-180B, 180-181, 182-183, 212A-212B, 212-213, 226A-226B, 226-227, 228-229, 230-231, 264A-264B, 264-265, 278A-278B, 278-279, 280-281, 312A-312B, 312-313, 324A-324B, 324-235, 334-335, 362A-362B, 362-363, 374A-374B, 374, 375, 388-389, 414A-414B, 414-415, 434A-434B, 434-436, 450-451, 490A-490B, 490-491, 512A-512B, 512-513, 520-521, 560A-560B, 560-561, 582A-582B, 582-583, 598-599, 648A-648B, 648-649, 674A-674B, 674-675, 676A-676B, 676-677, 706A-706B, 706-707, 710A-710B, 710-711, 724-725

2.5.2 Evaluate results for reasonableness.

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

2.5.3 Evaluate conclusions using evidence.

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

EALR 3 The student communicates knowledge and understanding in both everyday and mathematical language.

Component 3.1: Gather Information

3.1.1 Apply a plan for collecting information for a given purpose, which requires using number sense, measurement, geometric sense, or probability and statistics.

6: 620A-620B, 620-623

3.1.2 Analyze mathematical information for a given purpose, requiring number sense, measurement, geometric sense, or probability and statistics from multiple sources using reading, listening, and observation.

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

Component 3.2: Organize and Interpret Information**3.2.1 Understand how to organize and interpret information for a given purpose (reflecting, verbalizing, discussing, and writing).**

6: 278A-278B, 278-279, 324A-324B, 324-325, 362A-362B, 362-363, 512A-512B, 512-513, 674A-674B, 674-675

Component 3.3: Represent and Share Information**3.3.1 Understand how to express and present ideas using mathematical language and notation.**

6: 62-63, 128-129, 190-191, 136-137, 288-289, 342-343, 396-397, 458-459, 528-529, 606-607, 684-685, 732-733

3.3.2 Understand how to represent ideas and information from number sense, measurement, geometric sense, and probability and statistics in ways appropriate to audience and purpose.

6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651, 69A-698B, 698-699, 718A-718B, 718-121

EALR 4: The student understands how mathematical ideas connect within mathematics, other subject areas, and real-world situations.

Component 4.1: Relate Concepts and Procedures within Mathematics**4.1.1 Apply concepts and procedures from a variety of content strands (number sense, measurement, geometric sense, and probability and statistics) in a given problem or situation.**

6: 8-11, 24-27, 28-29, 30-31, 40-43, 44-47, 48-51, 112-115, 116-119, 274-275, 276-277, 328-329, 380-383, 384-385, 386-387, 408-409, 410-411, 412-413, 418-421, 422-425, 426-427, 428-429, 430-431, 698-699, 700-705

4.1.2 Analyze relationships between equivalent mathematical models and representations.

6: 628A-628B, 628-631, 632A-632B, 632-633, 636A-636B, 636-637, 638A-638B, 638-641, 642A-642B, 642-647, 650A-650B, 650-651, 69A-698B, 698-699, 718A-718B, 718-121

Component 4.2: Relate Mathematical Concepts Procedures to Other Disciplines**4.2.1 Analyze the concepts, strategies, and procedures from other disciplines.****6:** 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721**4.2.2 Apply mathematical thinking and modeling in other disciplines.****6:** 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721**4.2.3 Understand the importance of contributions to the development of mathematics such as the contributions of women, men, and different cultures.****6:** 7, 149, 163, 605**Component 4.3:** Relate Mathematical Concepts and Procedures to Real-World Situations**4.3.1 Understand the extensive uses of mathematics outside the classroom.****6:** 35, 103, 175, 223, 269, 309, 383, 466, 479, 557, 645, 721**4.3.2 Understand how mathematics is used in several occupations/careers of interest.****6:** 6