

A Correlation of

**SCOTT FORESMAN ■ ADDISON WESLEY**

**Mathematics**

© 2004

to the

**Hawaii**  
Mathematics Content  
Standards

**Grades K-6**



P/M-1

## 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 Hawaii Mathematics Content Standards. Correlation page references are to the Teacher's Edition, which contains facsimile Student Edition pages.

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

### ● Reaching All Learners

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

### ● Test Prep

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

### ● Priority on problem solving:

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

### ● Instructional Support

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

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

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**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Kindergarten**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<b>• Sort, match, compare, and order collections and items within collections.</b>	13A-13B, 13-14, 15A-15B, 15-16, 17A-17B, 17-18, 63A-63B, 63-64, 87A-87B, 87-88, 89A-89B, 89-90, 121A-121B, 121-122
	<b>• Represent and use whole numbers and commonly used fractions with denominators no larger than four.</b>	51I, 55A, 55-56, 59A, 59-60, 61A, 61-62, 63-64, 65-66, 67-68, 81A, 81-82, 85A, 85-86, 87-88, 89-90, 91-92, 105A, 105-106, 107A, 107-108, 109A, 109-110, 111A, 111-112, 113B, 113-114, 117A, 117-118, 121-122, 123A, 123-124, 139-140, 141-142, 143-144, 147-148, 151-152, 159J, 167A, 167-168, 170, 173A, 173-174, 175A, 175-176, 179-180, 181-182, 183-184, 185A, 185-186, 190, 209, 213A, 213B, 214, 215A, 215B, 216, 217, 225-226, 227-228, 229-230, 231-232, 233-234, 235-236, 237-238, 245-246, 247-248, 249-250, 251-252,

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
(continued)		253-254, 255-256, 257-258, 265-266, 267-268, 269-270, 271-272, 273-274, 275-276, 277-278, 279-280, 287-288, 289A, 289-290, 291-292, 293-294, 295-296
	<ul style="list-style-type: none"> <li>• Compare, order, estimate, group and count (skip count, count on, count back) whole numbers less than one hundred.</li> </ul>	63A-63B, 63-64, 87A-87B, 87-88, 89A-89B, 89-90, 91A, 91, 113, 114, 121A-121B, 121-122, 287A, 287-288, 289A, 289-290, 293A, 293-294, 295A, 295-296, 297, 298, 299, 300
	<ul style="list-style-type: none"> <li>• Identify and use ten as a unit in counting.</li> </ul>	295A, 295B, 295, 296
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<ul style="list-style-type: none"> <li>• Understand meaning of addition (e.g., combine) and different meanings of subtraction (e.g., separate, compare, add on) of whole numbers.</li> </ul>	223I, 223J, 225A, 225-226, 227A, 227-228, 229A, 229-230, 231A, 231-232, 233-234, 235A, 235-236, 237A, 237-238, 243I, 243J, 245A, 245-246, 247A, 247-248, 249A, 249-250, 251A, 251-252, 253A, 253-254, 255A, 255-256, 257A, 257-258, 263I, 263J, 265A, 265-266, 267A, 267-268, 271A, 271-272, 273A, 273-274, 275A, 275-276, 277A, 277-278, 279A, 279-280

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Identify and describe situations when multiplication (e.g., equal groupings) and division (e.g., sharing/partitioning) are appropriate.</li> <li>• Explain that addition and subtraction of whole numbers can undo each other.</li> </ul>	<p>215A, 215B, 215, 216, 217A, 217B, 217, 218</p> <p>Refer to Grade 1, pages 137-142, 439, 440</p>
<p><b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b></p>	<ul style="list-style-type: none"> <li>• Compute using manipulatives, mental math, and paper and pencil.</li> </ul>	<p>223I, 223J, 225A, 225-226, 227A, 227-228, 229A, 229-230, 231A, 231-232, 233-234, 235A, 235-236, 237A, 237-238, 243I, 243J, 245A, 245-246, 247A, 247-248, 249A, 249-250, 251A, 251-252, 253A, 253-254, 255A, 255-256, 257A, 257-258, 263I, 263J, 265A, 265-266, 267A, 267-268, 271A, 271-272, 273A, 273-274, 275A, 275-276, 277A, 277-278, 279A, 279-280</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• <b>Develop and use strategies to solve number problems.</b></li> </ul>	243I, 243J, 245A, 245-256, 247A, 247-248, 249A, 249-250, 251A, 251-252, 253A, 253-254, 255A, 255-256, 257A, 257-258, 263J, 265A, 265-266, 267A, 267-268, 269A, 269-270, 271A, 271-272, 273A, 273-274, 275A, 275-276, 277A, 277-278, 279A, 279-280
	<ul style="list-style-type: none"> <li>• <b>Develop fluency with single-digit addition facts.</b></li> </ul>	225A-225B, 225-226, 227A-227B, 227-228, 229A-229B, 229-230, 235A-235B, 235-236
	<ul style="list-style-type: none"> <li>• <b>Recognize whether numerical solutions are reasonable.</b></li> </ul>	243I, 243J, 245A, 245-256, 247A, 247-248, 249A, 249-250, 251A, 251-252, 253A, 253-254, 255A, 255-256, 257A, 257-258, 263J, 265A, 265-266, 267A, 267-268, 269A, 269-270, 271A, 271-272, 273A, 273-274, 275A, 275-276, 277A, 277-278, 279A, 279-280

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<ul style="list-style-type: none"> <li>• Describe and identify length, weight, capacity, and coins.</li> </ul>	139A, 139-140, 141A, 141-142, 145A, 145-146, 147A, 147-148, 150, 151A, 151-152, 179A, 179-180, 181A, 181-182, 183A-183B, 183-184, 185A, 185-186, 189A, 189-190
	<ul style="list-style-type: none"> <li>• Compare and order objects by length, weight, or capacity; order events; trade nickels and dimes for pennies.</li> </ul>	131I, 131J, 135A-135B, 135-136, 137A-137B, 137-138, 149A-149B, 149-150, 151A-151B, 151-152, 181A, 181B, 181-182
	<ul style="list-style-type: none"> <li>• Estimate with and use nonstandard units to measure length, weight, and capacity; and standard units of inch, foot, and centimeter to measure length.</li> </ul>	139A-139B, 139-140, 141A, 141-142, 147A, 147-148, 151A-151B, 151-152
	<ul style="list-style-type: none"> <li>• Read hours and half hours; and use a.m. and p.m. appropriately.</li> </ul>	159J, 171A, 171B, 171, 172, 173A, 173B, 173, 174A, 174B, 174, 175
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• Recognize and find geometric shapes and structures in the world.</li> </ul>	197A, 197-198, 211A, 211-212, 213-214
	<ul style="list-style-type: none"> <li>• Identify, build, draw, describe, compare, and sort geometric solids; and identify, describe, and draw common plane figures.</li> </ul>	1P, 19-20, 39A, 39, 195I, 197A, 197-198, 199A-199B, 199-200, 201A, 201-202, 203A, 203-204, 205A, 205-206, 209A, 209-210



<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>2. Students use transformations and symmetry to analyze mathematical situations.</b>	• Use slides, flips, and turns to solve puzzles (e.g., jigsaw or picture puzzles).	195J, 207A, 207-208
	• Recognize two-dimensional symmetry in real situations and build shapes with reflectional symmetry.	211A, 211B, 211-212, 213-214
<b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b>	[None at this grade level cluster.]	Not applicable
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	• Use comparative and positional words.	3A-3B, 3-4, 5A, 5-6, 7A, 7-8, 91A, 91-92, 123-124
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	• Continue and describe simple spatial and numerical patterns.	25J, 35A, 35-36, 37A, 37-38, 39A, 39-40, 41A, 41-42, 43A, 43-44, 95A, 95-96
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	• Use concrete, pictorial, and verbal representations of simple numerical situations.	253A, 253-254, 255A, 255-256, 257A, 257-258, 273A, 273-274, 275A, 275-276, 277A, 277-278, 279-280

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• <b>Make comparisons and describe change in familiar situations (e.g., describe changes in weather).</b></li> </ul>	25I, 27A, 27-28, 51J, 63A, 63-64, 67-68, 87A, 87-88, 89A, 89-90, 121A, 121-122, 269-270
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	<ul style="list-style-type: none"> <li>• <b>Pose questions, and collect and organize small data sets (e.g., tally).</b></li> </ul>	29A-29B, 29-30, 31A, 31-32, 33A, 33-34, 47A, 67A, 67-68, 125-126, 233A
	<ul style="list-style-type: none"> <li>• <b>Represent the collected data with objects, and with pictures.</b></li> </ul>	31A-31B, 33A, 33-34, 47A, 68
<b>2. Students interpret data using methods of exploratory data analysis.</b>	<ul style="list-style-type: none"> <li>• <b>Describe parts of the organized data (e.g., “How many more red than blue?”) and the data as a whole (e.g., “What is the total?”).</b></li> </ul>	29A, 29-30, 31A, 31-32, 33A, 33-34, 67A, 67-68
	<ul style="list-style-type: none"> <li>• <b>Identify those parts of the data that have special characteristics (e.g., “Which color was most? Least?”).</b></li> </ul>	29A, 29-30, 31A, 31-32, 33A, 33-34, 67A, 67-68

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
3. Students develop and evaluate inferences, predictions, and arguments that are based on data.	<ul style="list-style-type: none"> <li>• Use representation to answer posed and related questions.</li> </ul>	29A, 29-30, 31A, 31-32, 67A, 67-68
4. Students understand and apply basic notions of chance and probability.	<ul style="list-style-type: none"> <li>• Identify certainty and fairness in real world situations.</li> </ul>	125A-125B, 125, 126

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade One**

<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<b>• Sort, match, compare, and order collections and items within collections.</b>	29A, 29-30, 297A, 297-298
	<b>• Represent and use whole numbers and commonly used fractions with denominators no larger than four.</b>	20, 40, 155J, 181A, 181-182, 183A, 183-184, 185A, 185-186, 187A, 187-188, 189A, 189B, 189-190, 200, 283A, 283-284, 285A, 285-286, 287A, 287-288, 289-290, 326, 460, 465B
	<b>• Compare, order, estimate, group and count (skip count, count on, count back) whole numbers less than one hundred.</b>	239I, 239J, 243A-243B, 243-244, 245A, 245-246, 255A, 255B, 255-256, 257-258, 273, 297A, 297-298, 299A, 299-300, 301A, 301-302, 326
	<b>• Identify and use ten as a unit in counting.</b>	255A, 255, 273

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<p>• <b>Understand meaning of addition (e.g., combine) and different meanings of subtraction (e.g., separate, compare, add on) of whole numbers.</b></p>	<p>1J, 11A, 11-12, 13A, 13-14, 15A, 15-16, 17A, 17-18, 21A, 21-22, 25A, 25-26, 27A, 27-28, 40, 43I, 43J, 45A, 45-46, 47A, 47-48, 49A, 49-50, 51A, 51-52, 53A, 53-54, 55, 57A, 57-58, 61A, 61-62, 63A, 63-64, 65A, 65-66, 67A, 67-68, 69A, 69-70, 71-72, 75A, 75-76, 77A, 77-78, 79-80, 91-92, 93A, 93-94, 95-96, 97A, 97-98, 99-100, 103-104, 105A, 105-106, 107-108, 109-110, 111-112, 113-114, 123I, 125A, 125-126, 127A, 127-128, 129A, 129-130, 131-132, 133-134, 137-138, 139-140, 141A, 141-142, 143-144, 145-146, 152, 317-318, 417-418, 419A, 419-420, 421-422, 423-424, 425A, 425-426, 435-436, 437-438, 439A, 439-440, 441A, 441-442, 443A, 443-444, 451</p>
	<p>• <b>Identify and describe situations when multiplication (e.g., equal groupings) and division (e.g., sharing/partitioning) are appropriate.</b></p>	<p>181-182, 183-184, 185-186, 189-190, 195, 202, 218, 257-258, 451, 492A</p>
	<p>• <b>Explain that addition and subtraction of whole numbers can undo each other.</b></p>	<p>137A-137B, 137-138, 139A, 139B, 139-140, 141A, 141B, 141-142, 439A-439B, 439-440</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b>	<b>• Compute using manipulatives, mental math, and paper and pencil.</b>	22, 76, 86, 113-114, 118, 120, 133, 143-144, 145-146, 150, 152, 291-292, 317A, 317-318, 326, 349-350, 351A, 420, 436, 445-446
	<b>• Develop and use strategies to solve number problems.</b>	22, 76, 86, 113-114, 118, 120, 133, 143-144, 145-146, 150, 152, 291-292, 317A, 317-318, 326, 349-350, 351A, 420, 436, 445-446
	<b>• Develop fluency with single-digit addition facts.</b>	41-42, 45A, 45B, 45, 46, 53A-53B, 53-54
	<b>• Recognize whether numerical solutions are reasonable.</b>	11, 13, 18, 29, 31, 45, 47, 49, 55, 57, 71, 91, 93, 99, 103, 105, 107, 111, 129, 133, 139, 141, 143, 191, 241, 243, 245, 249, 251, 287, 326
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<b>• Describe and identify length, weight, capacity, and coins.</b>	343A, 343-344, 345A, 345-346, 347A, 347-348, 357, 358, 360, 365A, 365-366, 369A, 369-370, 371-372, 373A, 373-374, 375A, 375-376, 383A, 383-384, 389-390, 409, 412

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Compare and order objects by length, weight, or capacity; order events; trade nickels and dimes for pennies.</li> </ul>	9B, 9C, 9E, 12A-12F, 329, 331-332, 335-336, 337-338, 339-340, 341, 343-344, 345-346, 353, 355, 356, 358, 359, 361-362, 369-370, 371-372, 373-374, 375-376, 389-390, 391A, 414A, 414B, 458, 470, 484
	<ul style="list-style-type: none"> <li>• Estimate with and use nonstandard units to measure length, weight, and capacity; and standard units of inch, foot, and centimeter to measure length.</li> </ul>	205-206, 221-222, 367-368, 369A, 369-370, 373A, 373, 383-384, 385A, 385, 389A, 389-390, 393A, 393-394
	<ul style="list-style-type: none"> <li>• Read hours and half hours; and use a.m. and p.m. appropriately.</li> </ul>	207A, 207-208, 209A, 209-210, 211A, 211-212, 215A, 215-216, 223A, 223, 236
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• Recognize and find geometric shapes and structures in the world.</li> </ul>	157A, 157-158, 229
	<ul style="list-style-type: none"> <li>• Identify, build, draw, describe, compare, and sort geometric solids; and identify, describe, and draw common plane figures.</li> </ul>	157A, 157-158, 165B, 307A, 307-308

<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>2. Students use transformations and symmetry to analyze mathematical situations.</b>	• Use slides, flips, and turns to solve puzzles (e.g., jigsaw or picture puzzles).	173A, 173-174, 198
	• Recognize two-dimensional symmetry in real situations and build shapes with reflectional symmetry.	171A, 171-172, 173A, 173-174, 198
<b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b>	[None at this grade level cluster.]	Not applicable
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	• Use comparative and positional words.	29A, 29-30, 297A, 297-298
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	• Continue and describe simple spatial and numerical patterns.	3-4, 5A, 5-6, 7A, 7-8, 37, 166, 210, 256, 302, 422, 462, 476
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	• Use concrete, pictorial, and verbal representations of simple numerical situations.	77-78, 89I, 89J, 91A, 91-92, 105-106, 107A, 107-108, 127-128, 139-140, 297A, 297B, 297-298, 423-424, 441-442
	• Make comparisons and describe change in familiar situations (e.g., describe changes in weather).	29A, 29-30, 297A, 297-298



<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	• Pose questions, and collect and organize small data sets (e.g., tally).	309A, 309-310, 311A, 311-312, 324
	• Represent the collected data with objects, and with pictures.	177-178, 309A, 309-310, 311A, 311-312, 481A, 481-482
<b>2. Students interpret data using methods of exploratory data analysis.</b>	• Describe parts of the organized data (e.g., “How many more red than blue?”) and the data as a whole (e.g., “What is the total?”).	177-178, 191A, 191-192, 223-224, 251A, 251-252, 339A, 339-340, 431A, 431-432, 481A, 481-482
	• Identify those parts of the data that have special characteristics (e.g., “Which color was most? Least?”).	177-178, 191A, 191-192, 223-224, 251A, 251-252, 339A, 339-340, 431A, 431-432, 481A, 481-482
<b>3. Students develop and evaluate inferences, predictions, and arguments that are based on data.</b>	• Use representation to answer posed and related questions.	177-178, 309A, 309-310, 311A, 311-312, 324
<b>4. Students understand and apply basic notions of chance and probability.</b>	• Identify certainty and fairness in real world situations.	401A, 401-402, 403A, 403B, 403-404, 410

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade Two**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<b>• Represent and use whole numbers up to one hundred and commonly used fractions with denominators no larger than ten.</b>	3A, 3-4, 5-6, 9-10, 17-18, 109A, 109-110, 111A, 111-112, 113A, 113-114, 115-116, 119A, 119-120, 127, 245J, 269A, 269-270, 271A, 271-272, 273A, 273-274, 277A, 277-278, 392, 400, 405-406, 416, 425I, 425J
	<b>• Recognize and use equivalent forms of common fractions; and compare commonly used fractions with denominators no larger than ten.</b>	269A, 269B, 269, 270, 277A, 277B, 277, 278, 281, 283
	<b>• Compare, order, estimate, group (e.g., even and odd), and count whole numbers up to one thousand.</b>	81A, 81-82, 83A, 83-84, 85A, 85-86, 91A, 91-92, 97A, 97-98, 101A, 101, 102, 115-116, 393A, 393-394, 395A, 395-396, 389J, 399A, 399-400, 407A, 407-408, 409A, 409-410, 419

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Extend place value to recognize and use one hundred as a unit and one-tenth as a unit.</li> </ul>	83-84, 389I, 391A, 391-392, 393A, 393-394, 395A, 395-396, 397A, 397-398
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<ul style="list-style-type: none"> <li>• Use the properties of addition of whole numbers (associativity, commutativity, and zero as an addend).</li> </ul>	4, 6, 10, 23, 24, 26, 49, 50
	<ul style="list-style-type: none"> <li>• Explain that subtraction of whole numbers is neither associative nor commutative.</li> </ul>	215A, 215B, 215, 216, 217A, 217B, 217, 218, 221A, 221B, 221, 222, 223, 224, 231A, 231B, 231, 232, 237, 238
	<ul style="list-style-type: none"> <li>• Write number sentences for situations involving addition, subtraction, multiplication, for division.</li> </ul>	1I, 5A, 5-6, 9A, 9-10, 17A, 17-18, 19A, 19-20, 23A, 23-24, 26, 27A, 27-28, 36, 38, 45-46, 47, 57-58, 64, 76, 135, 139-140, 145-146, 147, 221A, 221-222, 377A, 479A, 479B, 479-480, 485A, 485B, 485-486, 491, 492
	<ul style="list-style-type: none"> <li>• Explain that multiplication and division of whole numbers can undo each other.</li> </ul>	Refer to Grade 3 on pages 372, 373, 384-386, 388, 390, 392, 402

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b>	<b>• Develop and use strategies, including mental arithmetic and calculator and invent algorithms to find sums and differences up to one hundred.</b>	29-30, 31-32, 46, 48, 52, 76, 86, 92, 114, 120, 136, 140, 146, 185A, 186, 193-194, 198, 206, 225A, 226, 233A, 233-234, 377-378
	<b>• Extend fluency with single-digit addition facts to include single-digit subtraction and multiplication facts; and fluently add, subtract, and multiply with multiples of ten.</b>	23-24, 25-26, 27-28, 411, 43-44, 45-46, 47-48, 51-52, 53-54, 61-62, 63-64, 65-66, 469A, 469B, 469-470
	<b>• Recognize whether numerical solutions are reasonable, and estimate quantities.</b>	96, 133I, 141A, 141-142, 149A, 149-150, 170, 191A, 191-192, 229A, 229-230, 275A, 275-276, 324, 343-344, 345A, 346, 348, 358, 406
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<b>• Describe and identify area, volume, and money.</b>	115A, 115-116, 117-118, 121A, 121-122, 355A, 355-356, 357A, 357-358
	<b>• Compare and order objects by area or volume and make exchanges among nickels, dimes, quarters, pennies, and dollars.</b>	115A, 115-116, 117-118, 121A, 121-122, 355A, 355-356, 357A, 357-358

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Tell time to the minute.</li> </ul>	291A, 291-292, 293A, 293-294, 295A, 295-296, 299A, 299-300, 334
	<ul style="list-style-type: none"> <li>• Develop referents for estimation (e.g., width of little finger is about 1 cm).</li> </ul>	341A, 341B, 341-342
	<ul style="list-style-type: none"> <li>• Estimate and measure area, weight, and volume with non-standard units.</li> </ul>	339I, 342, 353A, 353-354, 364
	<ul style="list-style-type: none"> <li>• Estimate and measure length, time, and temperature using standard units.</li> </ul>	355A, 355-356, 357A, 357-358, 365A, 365-366, 367A, 367-368
	<ul style="list-style-type: none"> <li>• Develop and use the concept of unit in a variety of measuring contexts.</li> </ul>	242, 299-300, 301A, 301-302, 305A, 305-306, 334, 343-344, 345A, 345-346, 347-348, 355-356, 357-358, 365-366, 367-368, 386
	<ul style="list-style-type: none"> <li>• Identify appropriate units for length, area, capacity, and weight.</li> </ul>	242, 299-300, 301A, 301-302, 305A, 305-306, 334, 343-344, 345A, 345-346, 347-348, 355-356, 357-358, 365-366, 367-368, 386

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• Describe and compare properties of common plane figures and solids.</li> </ul>	247A, 247-248, 249A, 249-250, 251A, 251-252, 255A, 255-256, 257A, 257, 265A, 265-266, 284
	<ul style="list-style-type: none"> <li>• Relate geometric ideas to number and measurement ideas (e.g., number of sides; corners; perimeter; less than, greater than, equal to a right angle or square corner).</li> </ul>	245I, 247A, 247-248, 251A, 251-252, 255A, 255-256, 384
	<ul style="list-style-type: none"> <li>• Predict and describe the results of combining geometric shapes.</li> </ul>	255A, 255-256, 284
	<ul style="list-style-type: none"> <li>• Identify congruent and similar shapes.</li> </ul>	257A, 257-258, 266
<b>2. Students use transformations and symmetry to analyze mathematical situations.</b>	<ul style="list-style-type: none"> <li>• Recognize and perform slides, flips, and turns on shapes.</li> </ul>	259A, 259-260
	<ul style="list-style-type: none"> <li>• Recognize and create reflectional and rotational symmetry of plane figures.</li> </ul>	259A, 259-260, 261A, 261-262, 280, 286
<b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b>	<ul style="list-style-type: none"> <li>• Make simple maps of familiar surroundings (e.g., home, school, journey from home to school).</li> </ul>	Related Content: 325A-325B, 325-326

<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	• Describe relative position and direction (e.g., north, south, west, and east).	325A, 325-326
	• Find and name locations with simple relations (e.g., three steps to the left) and coordinate systems.	325A, 325-326
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	• Create and describe spatial and numerical patterns.	99A, 99-100, 157-158, 408, 413A, 413-414, 420, 476
	• State a general rule that describes a given pattern (e.g., add four).	44, 73, 74, 157A, 157-158, 167, 182, 413B, 413-414, 420
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	• Represent the same pattern in different forms (e.g., aab red, red, blue).	413A
	• Use concrete, pictorial, and verbal representations of numerical situations.	11, 5A, 5-6, 9A, 9-10, 17A, 17-18, 19A, 19-20, 23A, 23-24, 26, 27A, 27-28, 36, 38, 45-46, 47, 57-58, 64, 76, 135, 139-140, 145-146, 147, 221A, 221-222, 377A, 467A, 471A, 483A, 483-484, 490

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• <b>Symbolize mathematical situations (e.g., <math>7 + 1 = 8</math>, <math>+ 2 - 2 =</math>, <math>\times 5 \div 5 =</math>).</b></li> </ul>	91A, 91B, 91, 92, 109A, 109B, 109, 110, 121A, 121B, 121, 122, 125, 127, 399A, 399B, 399, 400, 403
	<ul style="list-style-type: none"> <li>• <b>Quantify comparisons and describe change in familiar situations (e.g., measuring temperature and height changes).</b></li> </ul>	366, 369A, 369-370
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	<ul style="list-style-type: none"> <li>• <b>Pose questions, and collect and organize data.</b></li> </ul>	38, 117-118, 289J, 311A, 312, 313A, 313, 319A, 319, 322, 386
	<ul style="list-style-type: none"> <li>• <b>Represent data with bar graphs and with pictures.</b></li> </ul>	319A, 319B, 319-320, 321A, 321B, 321, 322, 331, 332
<b>2. Students interpret data using methods of exploratory data analysis.</b>	<ul style="list-style-type: none"> <li>• <b>Use a graph of organized data to build possible data sets.</b></li> </ul>	405A, 405B, 405-406
	<ul style="list-style-type: none"> <li>• <b>Given information about a data set, build possible representations (e.g., “In this package red is most and there are more blue than green. What could the graph look like?”).</b></li> </ul>	405A, 405B, 405-406



Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
3. Students develop and evaluate inferences, predictions, and arguments that are based on data.	<ul style="list-style-type: none"> <li>• Answer questions and make predictions based on representations of data.</li> </ul>	405A, 405B, 405-406
4. Students understand and apply basic notions of chance and probability.	<ul style="list-style-type: none"> <li>• Explain concepts of certainty and fairness in real world situations.</li> </ul>	339J, 373-374, 375-376
	<ul style="list-style-type: none"> <li>• Predict the likelihood of random events and test predictions by experiment.</li> </ul>	339J, 373A, 373-374, 375A, 375-376

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade Three**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<ul style="list-style-type: none"> <li>• Represent and use whole numbers up to one hundred and commonly used fractions with denominators no larger than ten.</li> </ul>	6A-6B, 6-7, 8A, 8-9, 10A, 10-11, 12A-12B, 12-13, 56-57, 498A, 498-501, 502A, 502-503, 504A, 504, 512A, 512-513, 516A, 516-517, 518A, 519, 522-525, 542A, 542, 547, 554-556, 564A, 564-565, 567
	<ul style="list-style-type: none"> <li>• Recognize and use equivalent forms of common fractions; and compare commonly used fractions with denominators no larger than ten.</li> </ul>	504A, 504B, 504-505, 506A-506B, 506-507, 508, 509, 512-513, 514, 554, 555
	<ul style="list-style-type: none"> <li>• Compare, order, estimate, group (e.g., even and odd), and count whole numbers up to one thousand.</li> </ul>	6A-6B, 6-7, 8A, 8-9, 10A, 10-11, 12A-12B, 12-13, 18A, 18-21, 22A, 22-23, 56-57, 58
	<ul style="list-style-type: none"> <li>• Extend place value to recognize and use one hundred as a unit and one-tenth as a unit.</li> </ul>	6A, 6-7, 10-11, 12A, 12-13, 44-45, 56, 57, 564A, 564B, 564-567, 615

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<p>• Use the properties of addition of whole numbers (associativity, commutativity, and zero as an addend).</p>	<p>66A, 66B, 66, 67, 78, 79, 262A, 263, 286, 342</p>
	<p>• Explain that subtraction of whole numbers is neither associative nor commutative.</p>	<p>70A, 70B, 70-71, 78, 79, 94A, 94B, 94-95, 106, 107, 156A, 156B, 156-157, 158, 159</p>
	<p>• Write number sentences for situations involving addition, subtraction, multiplication, for division.</p>	<p>74-75, 76A, 76-77, 96-97, 168-169, 260-261, 262A, 262-265, 372A, 372-373, 401</p>
	<p>• Explain that multiplication and division of whole numbers can undo each other.</p>	<p>384A, 384-385, 386A, 386-387, 388A, 388-389, 390-391, 402A, 402-403, 418-421, 653-654</p>
<p><b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b></p>	<p>• Develop and use strategies, including mental arithmetic and calculator and invent algorithms to find sums and differences up to one hundred.</p>	<p>24-27, 66A, 66-69, 76-77, 80A, 80-81, 82A, 82-85, 94A, 94-95, 96A, 96-97, 124I, 126A, 126-127, 128A, 128-131, 132A, 132-135, 136A, 136-137, 148A, 148-149, 150A, 150-151, 152A, 152-155, 156A, 156-157, 166A, 166-167, 182-185</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• <b>Extend fluency with single-digit addition facts to include single-digit subtraction and multiplication facts; and fluently add, subtract, and multiply with multiples of ten.</b></li> </ul>	24-27, 66A, 66-69, 76-77, 80A, 80-81, 82A, 82-85, 94A, 94-95, 96A, 96-97, 124I, 126A, 126-127, 128A, 128-131, 132A, 132-135, 136A, 136-137, 148A, 148-149, 150A, 150-151, 152A, 152-155, 156A, 156-157, 166A, 166-167, 182-185, 260A, 260-261, 262A, 262-265, 266A, 266-267, 276A, 278, 279, 306-309, 316A, 316-317, 318A, 318, 320A, 320-322, 338A, 338-339, 610I, 626A, 626-629, 632A, 632-635
	<ul style="list-style-type: none"> <li>• <b>Recognize whether numerical solutions are reasonable, and estimate quantities.</b></li> </ul>	28A, 28-31, 64I-64J, 86A, 86-89, 90A, 90-91, 98A, 98-101, 160-161, 411, 510A, 510-511, 616A, 616-617, 623, 633-634, 637, 639
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<ul style="list-style-type: none"> <li>• <b>Describe and identify area, volume, and money.</b></li> </ul>	36A-36B, 36-39, 472A-472B, 472-473, 532A-532B, 532, 533, 534A-534B, 534, 535, 536A-536B, 536-537
	<ul style="list-style-type: none"> <li>• <b>Compare and order objects by area or volume and make exchanges among nickels, dimes, quarters, pennies, and dollars.</b></li> </ul>	36A, 36B, 36, 37, 38, 39, 41, 46, 47, 468A, 468B, 468, 469, 470, 471, 472A, 472B, 472, 478, 479, 680A, 680B, 680, 681, 682, 683, 698, 699

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	• Tell time to the minute.	192A, 192-195, 196A, 196-197, 200A, 200-201, 290
	• Develop referents for estimation (e.g., width of little finger is about 1 cm).	467, 533
	• Estimate and measure area, weight, and volume with non-standard units.	468A, 468B, 468, 469, 470, 471, 472A, 472B, 472, 478, 479, 680A, 680B, 680, 681, 682, 683, 698, 699
	• Estimate and measure length, time, and temperature using standard units.	192A, 192-195, 196A, 196-197, 200A, 200-201, 290, 532A-532B, 532, 533, 534A-534B, 534, 535, 536A-536B, 536-537, 696A, 696-697, 724
	• Develop and use the concept of unit in a variety of measuring contexts.	536A, 536-537, 538A, 538-539, 584A, 584-587, 680A, 680-682, 684A, 684-685, 690A, 690-693, 694A, 694-695, 722-723
	• Identify appropriate units for length, area, capacity, and weight.	468A-468B, 468, 469, 470, 471, 478, 479, 536A, 536-537, 538A, 538-539, 584A, 584-587, 680A, 680-682, 684A, 684-685, 690A, 690-693, 694A, 694-695, 722-723

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• Describe and compare properties of common plane figures and solids.</li> </ul>	428A, 428-430, 432A, 432-433, 442A, 442-443, 444A, 445, 446A, 446-448, 454A, 454-455, 474A, 474-475, 488-491
	<ul style="list-style-type: none"> <li>• Relate geometric ideas to number and measurement ideas (e.g., number of sides; corners; perimeter; less than, greater than, equal to a right angle or square corner).</li> </ul>	446A, 446-449, 450A, 451-452, 454A, 454-457, 474A, 474-475, 489, 490
	<ul style="list-style-type: none"> <li>• Predict and describe the results of combining geometric shapes.</li> <li>• Identify congruent and similar shapes.</li> </ul>	446A, 446-447, 450A, 450-453, 454A, 454-455, 476A, 477, 488-491  456A, 457-459
<b>2. Students use transformations and symmetry to analyze mathematical situations.</b>	<ul style="list-style-type: none"> <li>• Recognize and perform slides, flips, and turns on shapes.</li> </ul>	456A, 457-458, 459, 480-481
	<ul style="list-style-type: none"> <li>• Recognize and create reflectional and rotational symmetry of plane figures.</li> </ul>	456A, 456B, 456, 457
<b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b>	<ul style="list-style-type: none"> <li>• Make simple maps of familiar surroundings (e.g., home, school, journey from home to school).</li> </ul>	218B

<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	• Describe relative position and direction (e.g., north, south, west, and east).	218A, 218-221, 252
	• Find and name locations with simple relations (e.g., three steps to the left) and coordinate systems.	218A, 218-221, 252
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	• Create and describe spatial and numerical patterns.	24A, 24-27, 32-33, 72A, 72-73, 140-143, 270A, 270-273, 317, 330-331, 332A, 332-335, 344A, 344-345, 352-353, 361, 362, 363, 436-439, 529, 588A, 588-589
	• State a general rule that describes a given pattern (e.g., add four).	24A, 24-27, 330-331, 72A, 72-73, 344A, 344-345, 352-353, 362-363
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	• Represent the same pattern in different forms (e.g., aab red, red, blue).	Opportunity to address: 24A, 24-27, 32-33, 72A, 72-73, 140-143, 270A, 270-273, 317, 330-331, 332A, 332-335, 344A, 344-345, 352-353, 361, 362, 363, 436-439, 529, 588A, 588-589

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use concrete, pictorial, and verbal representations of numerical situations.</li> </ul>	74-75, 76A-76B, 76-77, 96-97, 168-169, 260-261, 262A, 262-265, 372A, 372-373, 401
	<ul style="list-style-type: none"> <li>• Symbolize mathematical situations (e.g., <math>7 + 1 = 8</math>, <math>+ 2 - 2 =</math>, <math>\times 5 \div 5 =</math>).</li> </ul>	18A, 18B, 18, 19, 20, 21, 34, 35, 36A, 36B, 36, 46,47, 168A, 168B 168, 169, 172, 173, 338A, 338B, 338, 339, 346A, 346B, 346, 347, 350, 351, 506A, 506B, 506, 507, 508, 509, 514, 515, 568A, 568B, 568, 569, 570, 571, 580, 581
	<ul style="list-style-type: none"> <li>• Quantify comparisons and describe change in familiar situations (e.g., measuring temperature and height changes).</li> </ul>	532A, 532B, 532-539, 696A, 696B, 697
<p><b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b></p>	<ul style="list-style-type: none"> <li>• Pose questions, and collect and organize data.</li> </ul>	190J, 204A, 204-207, 226A, 226-227, 228A, 228-231, 237, 253, 591
	<ul style="list-style-type: none"> <li>• Represent data with bar graphs and with pictures.</li> </ul>	212A, 212B, 212, 213, 214, 215, 226A, 226B, 226, 227, 228A, 228B, 228, 229, 230, 231
<p><b>2. Students interpret data using methods of exploratory data analysis.</b></p>	<ul style="list-style-type: none"> <li>• Use a graph of organized data to build possible data sets.</li> </ul>	208A, 208-211, 251



Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Given information about a data set, build possible representations (e.g., “In this package red is most and there are more blue than green. What could the graph look like?”).</li> </ul>	208A, 208-211, 251
<p><b>3. Students develop and evaluate inferences, predictions, and arguments that are based on data.</b></p>	<ul style="list-style-type: none"> <li>• Answer questions and make predictions based on representations of data.</li> </ul>	24A, 24-27, 32-33, 72A, 72-73, 140-143, 270A, 270-273, 317, 330-331, 332A, 332-335, 344A, 344-345, 352-353, 361, 362, 363, 436-439, 529, 588A, 588-589
<p><b>4. Students understand and apply basic notions of chance and probability.</b></p>	<ul style="list-style-type: none"> <li>• Explain concepts of certainty and fairness in real world situations.</li> <li>• Predict the likelihood of random events and test predictions by experiment.</li> </ul>	704A, 704-707, 709, 725  678J, 700A, 700-701, 702A, 702-703, 704A, 704-707, 708A, 708-709, 714-715, 725

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade Four**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<p><b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b></p>	<p><b>• Recognize and use primes, factors, multiples, fractions, decimals, whole number percents, and ratios.</b></p>	<p>28B, 28, 29, 34A, 34B, 34, 35, 36, 37, 42, 43, 124B, 124, 256A, 256B, 256, 257, 268, 314A, 314B, 314, 315, 330, 500A, 500B, 500, 501, 502A, 502B, 502, 503, 504A, 504B, 504, 505, 506, 507, 508A, 508B, 508, 509, 514, 515, 516A, 516B, 516, 517, 518, 519, 520A, 520B, 520, 521, 522A, 522B, 522, 523, 524A, 524B, 524, 525, 526, 527, 528, 529, 530A, 530B, 530, 531, 532, 533, 534A, 534B, 534, 535, 536A, 536B, 536, 537, 542, 543, 564A, 564B, 564, 565, 566, 567, 568A, 568B, 568, 569, 570, 571, 572, 573, 574A, 574B, 574, 575, 576, 577, 578A, 578B, 578, 579, 580, 581, 586, 587, 590A, 590B, 590, 591, 604, 605, 624A, 624B, 624, 625, 626, 627,</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	(continued)	628A, 628B, 628, 629, 630A, 630B, 630, 631, 632A, 632B, 632, 633, 634, 635, 636A, 636B, 636, 637, 638A, 638B, 638, 639, 640, 641, 642A, 642B, 642, 643, 645, 650, 651
	<ul style="list-style-type: none"> <li>• Represent and use whole numbers, fractions, ratios, decimals, and percents in equivalent forms to solve problems.</li> </ul>	4A, 4-7, 10A, 16A, 34A, 34-37, 52-55, 498I, 500A, 500-501, 502A, 502-503, 504A, 504-507, 516A, 516-519, 530A, 530-533, 552-555, 624A, 624-627, 678-679
	<ul style="list-style-type: none"> <li>• Compare and order whole numbers, fractions, decimals, and percents.</li> </ul>	16A, 16-19, 52-55, 522A, 522-533, 524A, 524-527, 534A, 534-535, 552-555, 622I, 630A, 630-631, 666A, 666-667, 678-681
	<ul style="list-style-type: none"> <li>• Relate fractions to decimals, decimals to percents, and fractions to percents and convert among them.</li> </ul>	624A-624B, 624-625, 626, 627, 634
	<ul style="list-style-type: none"> <li>• Extend place value concepts to recognize and use numbers smaller than tenths and larger than thousands.</li> </ul>	4A-4B, 4, 5, 6, 7, 8A, 8B, 8, 9, 628A-628B, 628, 629

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<p>• <b>Represent multiplication and division in various ways (e.g., multiplication as repeated addition, cartesian product, area, and array).</b></p>	<p>124A, 124-127, 146A, 146-147, 154A, 154-155, 180-183, 254J, 262A, 262-263, 264A, 264-267, 270A, 270-273, 274A, 274-275, 282A, 282-283, 304-307, 312I-312J, 320A, 320-323, 332A, 332-335, 336A, 336-337, 338A, 338-339, 356-359, 364I-364J, 366A, 366-367, 372A, 372-373, 374A, 374-377, 380A, 380-383, 386A, 386-389, 390A, 390-391, 424-427</p>
	<p>• <b>Describe situations involving addition, subtraction, multiplication, and division of fractions.</b></p>	<p>564A-564B, 564-567, 568A-568B, 568-571, 574A-574B, 574-577, 578A-578B, 578-581</p>
	<p>• <b>Use associative, commutative, and distributive properties as they apply to multiplication and division of whole numbers.</b></p>	<p>129, 132, 288A, 288B, 288-289</p>
	<p>• <b>Use properties of zero and one as they apply to all four whole number operations.</b></p>	<p>83, 129-131, 152A-152B, 152-153, 366A-366B, 366-367, 390A-390B, 390-391</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b>	<ul style="list-style-type: none"> <li>• Recall all single-digit multiplication facts and their related division facts.</li> </ul>	122I, 128A, 128-131, 136A, 136-137, 146A, 148A, 148-149, 150A, 150-151, 152A, 152-153, 180-183
	<ul style="list-style-type: none"> <li>• Develop and use strategies, including mental arithmetic strategies, and invent algorithms to find products and quotients.</li> </ul>	124A, 124-127, 146A, 146-147, 154A, 154-155, 180-183, 254J, 262A, 262-263, 264A, 264-267, 270A, 270-273, 274A, 274-275, 282A, 282-283, 304-307, 312I-312J, 320A, 320-323, 332A, 332-335, 336A, 336-337, 338A, 338-339, 356-359, 364I-364J, 366A, 366-367, 372A, 372-373, 374A, 374-377, 380A, 380-383, 386A, 386-389, 390A, 390-391, 424-427
	<ul style="list-style-type: none"> <li>• Develop algorithms for fraction operations.</li> </ul>	564A-564B, 564-567, 568A-568B, 568-571, 574A-574B, 574-577, 578A-578B, 578-581
	<ul style="list-style-type: none"> <li>• Choose appropriate computational procedures and tools to solve problems.</li> </ul>	86A, 86-87, 282A, 282-283, 338A, 338-339

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use estimation to solve problems and determine reasonableness of results, and decide when it is more appropriate to estimate than to compute.</li> </ul>	60I, 68A, 68-71, 72A, 72-73, 254I, 258-261, 316A, 316-319, 368A, 368-371, 538-539, 560I, 600A, 600-601, 636A, 636-637, 662-663
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<ul style="list-style-type: none"> <li>• Explain that all measurement is approximate and that precision is a function of the tool used.</li> </ul>	588A, 588-589, 592A, 594A, 594-595, 596A, 596-599, 614-617, 652A, 652-653, 654A, 654-655, 656A, 656-657, 658A, 658-661, 664A, 664-665
	<ul style="list-style-type: none"> <li>• Know and fluently use the common units of measure of both customary and metric systems of measure.</li> </ul>	558, 588A, 588B, 588, 589, 592A, 592B, 592, 593, 594A, 594B, 594, 595, 596A, 596B, 596, 597, 598, 599, 604, 605, 652A, 652B, 652, 653, 654A, 654B, 654, 656, 661, 664A, 664B, 664, 665, 668, 669
	<ul style="list-style-type: none"> <li>• Carry out simple unit conversions within a system of measurement (e.g., millimeters to centimeters to meters, feet to yards, pints to quarts to gallons, seconds to minutes to hours, days to weeks to months to years).</li> </ul>	596A, 596B, 596, 597, 598, 604, 605, 658A, 658B, 658, 659, 660, 668, 669

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use estimation and measurement to find perimeter, area, surface area, volume, weight, and mass.</li> </ul>	464, 471, 476-477, 493, 600A, 600-601
	<ul style="list-style-type: none"> <li>• Select and apply appropriate standard units and tools to estimate and measure.</li> </ul>	443, 588A, 588-589, 590A, 590-591, 592A-592B, 592-593, 594A, 594-595, 600-601, 622J, 652A-652B, 652-653, 656A, 656-657, 664A, 664-665
	<ul style="list-style-type: none"> <li>• Develop and use formulas to find perimeter, area (squares, rectangles, and triangles), and surface area and volume of rectangular solids.</li> </ul>	464A, 464B, 464, 465, 466, 467, 468A, 468B, 468, 469, 470, 471
	<ul style="list-style-type: none"> <li>• Use map scales to find distance between locations and make simple scale drawings.</li> </ul>	208B, 208, 232B, 232
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• Sort two- and three-dimensional shapes according to their properties and develop definitions of classes of shapes.</li> </ul>	434A, 434-437, 438A, 438-439, 440A, 440-443, 444A, 444-447, 448A, 448-449, 460A, 460-461, 490-493
	<ul style="list-style-type: none"> <li>• Predict and describe results of subdividing and recombining shapes.</li> </ul>	444A, 444B, 444, 445, 446

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• <b>Make conjectures about properties and relationships between properties, test conjectures, and formulate a conclusion.</b></li> <li>• <b>Analyze relationships among lines in the plane, (e.g., parallel and perpendicular lines).</b></li> </ul>	<p>434A, 434-437, 438A, 438-439, 440A, 440-443, 444A, 444-447, 448A, 448-449, 460A, 460-461, 490-493</p> <p>Refer to Grade 5 on pages: 329, 330</p>
<p><b>2. Students use transformations and symmetry to analyze mathematical situations.</b></p>	<ul style="list-style-type: none"> <li>• <b>Predict and describe results of sliding, flipping, and turning two-dimensional shapes.</b></li> </ul>	<p>452A, 452-455, 491</p>
	<ul style="list-style-type: none"> <li>• <b>Describe a motion or series of motions needed to match two congruent figures.</b></li> </ul>	<p>453A, 453B, 453, 454</p>
	<ul style="list-style-type: none"> <li>• <b>Predict and describe reflectional and rotational symmetry in various two-dimensional shapes.</b></li> </ul>	<p>452A, 452-455, 491</p>
	<ul style="list-style-type: none"> <li>• <b>Identify symmetry in three-dimensional objects.</b></li> </ul>	<p>452A, 452-455, 491</p>
<p><b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b></p>	<ul style="list-style-type: none"> <li>• <b>Identify a three-dimensional object from a set of two-dimensional views.</b></li> </ul>	<p>434A, 435</p>



Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Describe and sketch two-dimensional nets of three-dimensional objects; predict three-dimensional results of a two-dimensional <i>net</i>.</li> </ul>	434A, 435
	<ul style="list-style-type: none"> <li>• Describe how to get from a given point to another point.</li> </ul>	452-455, 456A, 456-457, 458A, 458-459
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	<ul style="list-style-type: none"> <li>• Describe location and movement using appropriate geometric vocabulary.</li> </ul>	212A, 212-215, 686I, 692A, 692-695
	<ul style="list-style-type: none"> <li>• Make and use coordinate maps to represent actual places in an area.</li> </ul>	212A, 212-215, 686I, 692A, 692-695
	<ul style="list-style-type: none"> <li>• Find horizontal or vertical distances on a coordinate system.</li> </ul>	212A, 212-215, 686I, 692A, 692-695
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	<ul style="list-style-type: none"> <li>• Create, describe, analyze, and extend numeric and geometric patterns (e.g., growing and shrinking patterns and square numbers).</li> </ul>	88-89, 90A, 90-91, 128-131, 164A, 164-165, 182-183, 454, 585, 648A, 641, 648-649
	<ul style="list-style-type: none"> <li>• Identify and describe relationships between two quantities that vary directly (e.g., length of a square and its area) and inversely (e.g., number of children to the size of piece of pizza).</li> </ul>	90-91, 136-137, 140-143, 164A, 164-165, 183

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use generalizations to make predictions; check that the generalization fits the given pattern.</li> </ul>	88-89, 90-91, 172-173, 342A, 342-343, 648-649
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	<ul style="list-style-type: none"> <li>• Represent unknown quantities and relationships among them with symbols.</li> </ul>	160A, 160-163, 166-167, 172-173, 394-395, 396A, 396-399, 690A, 690-691
	<ul style="list-style-type: none"> <li>• Identify and represent properties of operations (e.g., <math>+</math> = <math>+</math>).</li> </ul>	62-63, 80A, 80-81, 128-131, 132A, 132-133, 180-183, 262-263, 264A, 264-267, 288A, 288-289, 304-307
	<ul style="list-style-type: none"> <li>• Identify and describe situations with different rates of change.</li> </ul>	Refer to Grade 5 on pages: 654A, 654B, 654, 655, 656
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	<ul style="list-style-type: none"> <li>• Design investigations requiring data collection, including measured data.</li> </ul>	230A, 230B, 230-231
	<ul style="list-style-type: none"> <li>• Systematically collect and organize data (e.g., using tables, line graphs, or pie charts).</li> </ul>	204A, 204-205, 208-211, 216A, 216-218, 220-221, 222A, 222-223, 232-233, 696-697
	<ul style="list-style-type: none"> <li>• Translate among different representations of the same data.</li> </ul>	218A, 218B, 218-219, 220, 223, 229
	<ul style="list-style-type: none"> <li>• Analyze parts of a graph (e.g., axes, scale, legend).</li> </ul>	204A, 208A, 208-211, 220-221, 232A, 232-233, 243

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>2. Students interpret data using methods of exploratory data analysis.</b>	<ul style="list-style-type: none"> <li>• Describe the shape and important features of a set of organized data (e.g., range, mean, mode, median where appropriate).</li> </ul>	226A, 226-229, 249, 404A, 404-405, 427
	<ul style="list-style-type: none"> <li>• Classify and describe data in different ways; analyze information highlighted by different classifications (e.g., order categorical data alphabetically as opposed to order by popularity).</li> </ul>	198A, 198-199, 204A, 204-205, 206A, 206-207, 208A, 208-211, 216A, 216-219, 220-221, 222A, 222-223, 230A, 230-231, 232A, 232-233, 246-249, 342-343, 460-461, 536A, 536-537, 662-663
	<ul style="list-style-type: none"> <li>• Compare related data sets.</li> </ul>	226A, 226B, 226, 227, 404A, 404B, 404, 405
<b>3. Students develop and evaluate inferences, predictions, and arguments that are based on data.</b>	<ul style="list-style-type: none"> <li>• Describe how data collection methods can impact the nature of the data set.</li> </ul>	230A, 230B, 230-231
	<ul style="list-style-type: none"> <li>• Explain the concept of representativeness of a sample.</li> </ul>	Refer to Grade 5 on pages: 260-261
	<ul style="list-style-type: none"> <li>• Describe the population based on a given sample.</li> </ul>	Refer to Grade 5 on pages: 260-261
	<ul style="list-style-type: none"> <li>• Propose and justify conclusions based on data.</li> </ul>	Refer to Grade 5 on pages: 260-261

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>4. Students understand and apply basic notions of chance and probability.</b>	<ul style="list-style-type: none"> <li>• <b>Formulate questions or hypotheses based on initial data collection and design further studies to explore them.</b></li> </ul>	686J, 710A, 710-711
	<ul style="list-style-type: none"> <li>• <b>Describe the degree of likelihood of random events with fractions between 0 and 1.</b></li> </ul>	686J, 700A, 700-703, 706A, 706-709, 710A, 710-711, 730
	<ul style="list-style-type: none"> <li>• <b>Estimate and test by experiment the probabilities of outcomes.</b></li> </ul>	686J, 710A, 710-711
	<ul style="list-style-type: none"> <li>• <b>List all possible outcomes of a simple experiment.</b></li> </ul>	704A, 704-705, 706A, 706-709

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade Five**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<b>• Recognize and use primes, factors, multiples, fractions, decimals, whole number percents, and ratios.</b>	84A, 84-85, 162A, 162-163, 164A, 164-167, 414A, 414-415, 416A, 416-417, 464A, 464-465, 466-469, 668A, 668B, 668-669, 678
	<b>• Represent and use whole numbers, fractions, ratios, decimals, and percents in equivalent forms to solve problems.</b>	2I, 8A, 8-11, 14A, 14-17, 398A, 400A, 400-401, 410A, 410-411, 412A, 412-413, 416A, 416-417, 426A, 426-429, 430A, 430-433, 450, 451, 452, 453, 454, 455, 456, 457, 458I, 648A, 648-651, 668A, 668-669
	<b>• Compare and order whole numbers, fractions, decimals, and percents.</b>	6A, 6-7, 12A, 12-13, 56, 60, 404A, 404-405, 418A, 418-419, 420A, 420-423, 430A, 430-431, 451, 452, 453, 455, 456, 457
	<b>• Relate fractions to decimals, decimals to percents, and fractions to percents and convert among them.</b>	426A-426B, 426, 427, 428, 429, 668A-668B, 668-669, 678

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Extend place value concepts to recognize and use numbers smaller than tenths and larger than thousands.</li> </ul>	4A-4B, 4-5, 8A-8B, 8, 9, 10, 11
<p><b>2. Students understand the meaning of operations and how they relate to each other.</b></p>	<ul style="list-style-type: none"> <li>• Represent multiplication and division in various ways (e.g., multiplication as repeated addition, cartesian product, area, and array).</li> </ul>	132-135, 192, 196, 490A, 502B, 502-503
	<ul style="list-style-type: none"> <li>• Describe situations involving addition, subtraction, multiplication, and division of fractions.</li> </ul>	66A, 66-67, 70A, 70-71, 122, 126
	<ul style="list-style-type: none"> <li>• Use associative, commutative, and distributive properties as they apply to multiplication and division of whole numbers.</li> </ul>	66A, 66-67, 70A, 70-71, 122, 126
	<ul style="list-style-type: none"> <li>• Use properties of zero and one as they apply to all four whole number operations.</li> </ul>	89, 95, 98, 99, 156A-156B, 156-157, 170, 171, 224A-224B, 224-225, 228

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b>	<ul style="list-style-type: none"> <li>• Recall all single-digit multiplication facts and their related division facts.</li> </ul>	132-135, 192, 196, 490A, 502B, 502-503
	<ul style="list-style-type: none"> <li>• Develop and use strategies, including mental arithmetic strategies, and invent algorithms to find products and quotients.</li> </ul>	66A, 66B, 66, 67, 68A, 68B, 68, 69, 72A, 72B, 72, 73, 74, 75, 82, 83, 84A, 84B, 84, 85, 86A, 86B, 86, 87, 88A, 88B, 88, 89, 90, 91, 92A, 92B, 92, 93, 94A, 94B, 94, 95, 96, 97, 98, 99, 132A, 132B, 132, 133, 134, 135, 136A, 136B, 136, 137, 138A, 138B, 138, 139, 140, 141, 148A, 148B, 148, 149, 150, 151, 152A, 152B, 152, 153, 154, 155, 156A, 156B, 156, 157, 158A, 158B, 158, 159, 160A, 160B, 160, 161, 170, 171, 202A, 202B, 202, 203, 204A, 204B, 204, 205, 206, 207, 212, 213, 214A, 214B, 214, 215, 216, 217, 218A, 218B, 218, 219, 220, 221, 224A, 224B, 224, 225, 228, 229, 230A, 230B, 230, 231, 240, 241
	<ul style="list-style-type: none"> <li>• Develop algorithms for fraction operations.</li> </ul>	458J, 460A-460B, 460-461, 462A-462B, 462-463, 466A-466B, 466-469, 470, 471, 490A, 490-493, 496A, 496-499, 520, 521, 524, 525

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Choose appropriate computational procedures and tools to solve problems.</li> </ul>	94-97, 114-115, 132A, 132-135, 144-145, 148-151, 152-155, 192, 193, 226-227, 253, 256, 482-483, 484A, 484-487, 504A, 504-505, 510-511, 520, 521, 524, 525
	<ul style="list-style-type: none"> <li>• Use estimation to solve problems and determine reasonableness of results, and decide when it is more appropriate to estimate than to compute.</li> </ul>	28A, 28-31, 68A, 68-69, 86A, 86-87, 130I, 204A, 204-207
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<ul style="list-style-type: none"> <li>• Explain that all measurement is approximate and that precision is a function of the tool used.</li> </ul>	332A, 332-335, 384, 388, 528A, 528-531, 532A, 532-533, 534A, 534-535, 562A, 562-563, 564A, 564-567, 568-569, 572A, 572-573, 584, 587, 588, 591
	<ul style="list-style-type: none"> <li>• Know and fluently use the common units of measure of both customary and metric systems of measure.</li> </ul>	528A, 528B, 528, 529, 530, 531, 534A, 534B, 534, 535, 546, 547, 614A, 614B, 614, 615, 616A, 616B, 616, 617, 618, 619, 620A, 620B, 620, 621, 622A, 622B, 622, 623, 628, 629



Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Carry out simple unit conversions within a system of measurement (e.g., millimeters to centimeters to meters, feet to yards, pints to quarts to gallons, seconds to minutes to hours, days to weeks to months to years).</li> </ul>	70-71, 528A, 528-531, 536A, 536-539, 562A, 562-563, 576-577, 584, 587, 588, 591, 614A, 614-615, 616A, 616-617, 620A, 620-621, 622-623, 626A, 626-627, 639, 640, 642, 643
	<ul style="list-style-type: none"> <li>• Use estimation and measurement to find perimeter, area, surface area, volume, weight, and mass.</li> </ul>	540A, 540B, 540, 541, 546, 547, 548A, 548B, 548, 549, 552A, 552B, 552, 560, 561, 602A, 602B, 602, 603, 608, 610A, 610B, 610, 611, 612, 618, 619, 620B, 621, 628, 629
	<ul style="list-style-type: none"> <li>• Select and apply appropriate standard units and tools to estimate and measure.</li> </ul>	332A, 332-335, 336-337, 531, 532A, 532-533, 534A, 534-535, 568A, 568-569, 616-617, 620-621
	<ul style="list-style-type: none"> <li>• Develop and use formulas to find perimeter, area (squares, rectangles, and triangles), and surface area and volume of rectangular solids.</li> </ul>	540A, 540-541, 550A, 550-551, 552A, 552-553, 554A, 554-555, 585, 586, 589, 590, 610A, 610-613, 639, 642
	<ul style="list-style-type: none"> <li>• Use map scales to find distance between locations and make simple scale drawings.</li> </ul>	662A, 662B, 662, 663, 664A, 664B, 664, 665, 666, 667

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>GEOMETRY</b>		
<b>1. Students analyze properties of objects and relationships among the properties.</b>	<ul style="list-style-type: none"> <li>• <b>Sort two- and three-dimensional shapes according to their properties and develop definitions of classes of shapes.</b></li> </ul>	336A, 336-337, 340A, 340-341, 342A, 342-345, 346A, 346-349, 356-357, 376-377, 384-386, 388-390, 558-559, 586, 590, 594-601, 638, 641
	<ul style="list-style-type: none"> <li>• <b>Predict and describe results of subdividing and recombining shapes.</b></li> </ul>	360A, 360-363, 364A, 364-367, 368A, 368-371, 372-373, 386, 387, 390, 391
	<ul style="list-style-type: none"> <li>• <b>Make conjectures about properties and relationships between properties, test conjectures, and formulate a conclusion.</b></li> </ul>	106A, 106B, 106, 107, 112, 113, 360A, 360B, 360, 361, 362, 363, 374, 375, 594A, 594B, 594, 595, 596, 597, 598A, 598B, 598, 599, 600, 601, 602A, 602B, 602, 603, 608, 609, 610A, 610B, 610, 611, 612, 613, 618, 619
	<ul style="list-style-type: none"> <li>• <b>Analyze relationships among lines in the plane, (e.g., parallel and perpendicular lines).</b></li> </ul>	328A, 328B, 328, 329, 330, 331, 338, 339

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>2. Students use transformations and symmetry to analyze mathematical situations.</b>	<ul style="list-style-type: none"> <li>• Predict and describe results of sliding, flipping, and turning two-dimensional shapes.</li> </ul>	364A, 364-367, 387, 391
	<ul style="list-style-type: none"> <li>• Describe a motion or series of motions needed to match two congruent figures.</li> </ul>	360A, 360-363, 386, 390
	<ul style="list-style-type: none"> <li>• Predict and describe reflectional and rotational symmetry in various two-dimensional shapes.</li> </ul>	368A, 368B, 368, 369, 372, 374
	<ul style="list-style-type: none"> <li>• Identify symmetry in three-dimensional objects.</li> </ul>	368B, 368, 370
<b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b>	<ul style="list-style-type: none"> <li>• Identify a three-dimensional object from a set of two-dimensional views.</li> </ul>	598A, 598B, 598, 599, 600, 601
	<ul style="list-style-type: none"> <li>• Describe and sketch two-dimensional nets of three-dimensional objects; predict three-dimensional results of a two-dimensional <i>net</i>.</li> </ul>	598A, 598B, 598, 599, 600, 601
	<ul style="list-style-type: none"> <li>• Describe how to get from a given point to another point.</li> </ul>	174A, 174-175, 724A, 724B, 724, 725

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	<ul style="list-style-type: none"> <li>• Describe location and movement using appropriate geometric vocabulary.</li> </ul>	174A, 174-175, 176A, 176-179, 195, 199, 652A, 652-653, 688, 691, 724A, 724B, 724, 725
	<ul style="list-style-type: none"> <li>• Make and use coordinate maps to represent actual places in an area.</li> </ul>	174B, 724B, 726
	<ul style="list-style-type: none"> <li>• Find horizontal or vertical distances on a coordinate system.</li> </ul>	724A, 724B, 724, 725, 726
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	<ul style="list-style-type: none"> <li>• Create, describe, analyze, and extend numeric and geometric patterns (e.g., growing and shrinking patterns and square numbers).</li> </ul>	14-17, 66-67, 84-85, 136-137, 142-143, 144A, 144-145, 350-351, 352A, 352-355, 606A, 606-607, 652-653, 664A, 664-665
	<ul style="list-style-type: none"> <li>• Identify and describe relationships between two quantities that vary directly (e.g., length of a square and its area) and inversely (e.g., number of children to the size of piece of pizza).</li> </ul>	552-553, 554-555, 558-559, 586, 590
	<ul style="list-style-type: none"> <li>• Use generalizations to make predictions; check that the generalization fits the given pattern.</li> </ul>	14-17, 100-103, 104A, 104-105, 106A, 106-107, 142-143, 144A, 144-145, 664A, 664-665, 694J

<b>Hawaii Standards</b>	<b>Hawaii Benchmarks</b>	<b>Scott Foresman – Addison Wesley Mathematics</b>
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	• Represent unknown quantities and relationships among them with symbols.	108-109, 700A, 700-701, 702A, 702-703, 704-705, 706A, 707-708
	• Identify and represent properties of operations (e.g., $+ = +$ ).	702A, 702B, 704, 705, 706A, 706B, 706, 707, 708, 709, 710, 711, 720A, 720B, 720, 721, 722
	• Identify and describe situations with different rates of change.	654A, 654B, 654, 655, 656
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	• Design investigations requiring data collection, including measured data.	260A, 260B, 260, 261, 280, 281
	• Systematically collect and organize data (e.g., using tables, line graphs, or pie charts).	260-261, 262A, 262-265, 266-269, 273-279, 288A, 286-291, 306-307, 311, 318-324, 438-439, 730-731
	• Translate among different representations of the same data.	262A, 262B, 262, 263, 264, 265, 280, 281
	• Analyze parts of a graph (e.g., axes, scale, legend).	262A, 262B, 262, 263, 264, 265, 266A, 266B, 266, 267, 268, 269, 280, 281

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<p><b>2. Students interpret data using methods of exploratory data analysis.</b></p>	<ul style="list-style-type: none"> <li>• Describe the shape and important features of a set of organized data (e.g., range, mean, mode, median where appropriate).</li> </ul>	<p>258I, 271-272, 276-279, 282A, 282-285, 306-307, 319, 323, 730-731</p>
	<ul style="list-style-type: none"> <li>• Classify and describe data in different ways; analyze information highlighted by different classifications (e.g., order categorical data alphabetically as opposed to order by popularity).</li> </ul>	<p>288A, 288B, 288, 289, 290, 291, 292A, 292B, 292, 293, 294, 295</p>
	<ul style="list-style-type: none"> <li>• Compare related data sets.</li> </ul>	<p>262A, 262B, 262, 263, 264, 265, 266A, 266B, 266, 267, 268, 269, 280-281</p>
<p><b>3. Students develop and evaluate inferences, predictions, and arguments that are based on data.</b></p>	<ul style="list-style-type: none"> <li>• Describe how data collection methods can impact the nature of the data set.</li> </ul>	<p>260A, 260B, 260, 261, 280, 281</p>
	<ul style="list-style-type: none"> <li>• Explain the concept of representativeness of a sample.</li> </ul>	<p>260A, 260B, 260, 261, 280, 281</p>
	<ul style="list-style-type: none"> <li>• Describe the population based on a given sample.</li> </ul>	<p>260A, 260B, 260, 261, 280, 281</p>
	<ul style="list-style-type: none"> <li>• Propose and justify conclusions based on data.</li> </ul>	<p>260-261, 262A, 262-265, 266-269, 273-279, 288A, 286-291, 306-307, 311, 318-324, 438-439, 730-731</p>

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>4. Students understand and apply basic notions of chance and probability.</b>	<ul style="list-style-type: none"> <li>• <b>Formulate questions or hypotheses based on initial data collection and design further studies to explore them.</b></li> </ul>	302A, 302B, 302, 303, 304, 305, 308, 309
	<ul style="list-style-type: none"> <li>• <b>Describe the degree of likelihood of random events with fractions between 0 and 1.</b></li> </ul>	302A, 302-305, 321, 325
	<ul style="list-style-type: none"> <li>• <b>Estimate and test by experiment the probabilities of outcomes.</b></li> </ul>	302A, 302B, 302, 303, 304, 305, 308, 309
	<ul style="list-style-type: none"> <li>• <b>List all possible outcomes of a simple experiment.</b></li> </ul>	300A, 300-301, 302-305, 321, 325

**Scott Foresman – Addison Wesley Mathematics  
to the  
Hawaii Mathematics Content Standards**

**Grade Six**

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>NUMBER AND OPERATIONS</b>		
<b>1. Students understand numbers, ways of representing numbers, relationships among numbers, and number systems.</b>	<ul style="list-style-type: none"> <li>• Recognize and use signed numbers (e.g., order and compare integers and rationals), proportions, and percents (e.g., use 15.1% or <math>4\frac{2}{3}\%</math>).</li> </ul>	408A-408B, 408, 409, 410, 411, 412A-412B, 412, 413, 416
	<ul style="list-style-type: none"> <li>• Explain and apply number theory concepts, (e.g., triangular and square numbers, prime and composite numbers, factors and multiples).</li> </ul>	9, 142A-142B, 142, 143, 144, 145, 146A-146B, 146, 147, 148, 149, 150A-150B, 150, 151, 152A-152B, 152, 153, 158, 159
	<ul style="list-style-type: none"> <li>• Represent and use exponents, absolute values, scientific notation, and square and cube roots.</li> </ul>	8A-8B, 8, 9, 10, 11, 22, 110A-110B, 110-111, 122, 408, 409
<b>2. Students understand the meaning of operations and how they relate to each other.</b>	<ul style="list-style-type: none"> <li>• Describe situations when addition, subtraction, multiplication, and division of integers, rationals, and numbers involving whole number non-negative exponents are appropriate.</li> </ul>	418A-418B, 418, 419, 420, 421, 422A-422B, 422, 423, 424, 425, 426A-426B, 426, 427, 428A-428B, 428, 429, 430A-430B, 430, 431, 438, 439



Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Recognize and use properties (closure, associative, commutative, distributive, identity, and inverse) and order of operations on rational numbers.</li> </ul>	24A-24B, 24, 25, 26, 27, 28A-28B, 28-29, 30A-30B, 30-31, 38, 39, 44A-44B, 44-47, 700, 701
	<ul style="list-style-type: none"> <li>• Understand and use inverse relationships among and within operations of addition and subtraction, multiplication and division, and squares and square roots.</li> </ul>	9, 700A, 700B, 700, 701, 708
<p><b>3. Students use computational tools and strategies fluently and when appropriate, use estimation.</b></p>	<ul style="list-style-type: none"> <li>• Select and use appropriate strategies for computing with rationals, ratios, exponents, square roots.</li> </ul>	110A-110B, 110-111, 122, 300A-300B, 300-301, 306A-309B, 306, 307, 308, 309, 314, 315, 316A-316B, 316, 326, 410A-410B, 410-411, 416, 417
	<ul style="list-style-type: none"> <li>• Use estimation as a means to check the reasonableness of results; and form upper and lower bounds.</li> </ul>	16A-16B, 16-17, 18A-18B, 18-19, 82A-82B, 82, 170A-170B, 170-171, 184, 216A, 216B, 216-217, 230, 256A, 256B, 256-257, 318B, 319, 354B, 357, 360, 368A, 368B, 368-369, 371, 381, 552A, 552B, 553

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>MEASUREMENT</b>		
<b>1. Students understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring.</b>	<ul style="list-style-type: none"> <li>• <b>Select appropriate units to estimate and measure angles, circumferences and areas of a circle, and surface area and volume of regular solids.</b></li> </ul>	476A, 476B, 476, 477, 478, 479, 492, 493, 576A, 576B, 576, 577, 578, 579, 580A, 580B, 580, 581, 584, 585, 590A, 590B, 590, 591, 592, 593, 594A, 594B, 594, 595, 596, 597, 600, 601
	<ul style="list-style-type: none"> <li>• <b>Estimate and measure angles in plane figures.</b></li> </ul>	476A, 476B, 476, 477, 478, 479, 492, 493
	<ul style="list-style-type: none"> <li>• <b>Develop and use formulas for circumference and area of a circle.</b></li> </ul>	576A, 576B, 576, 577, 578, 579, 580A, 580B, 580, 581, 584, 585
	<ul style="list-style-type: none"> <li>• <b>Develop and use formulas to find surface area and volumes of regular solids.</b></li> </ul>	590A, 590B, 590, 591, 592, 593, 594A, 594B, 594, 595, 596, 597, 600, 601
	<ul style="list-style-type: none"> <li>• <b>Select appropriately precise tools to achieve a desired accuracy in measurement.</b></li> </ul>	476A, 476B, 476, 477, 478, 479, 492, 493
	<ul style="list-style-type: none"> <li>• <b>Use ratios and proportions to solve problems related to measurement.</b></li> </ul>	316A, 316B, 316, 317, 326, 327
	<ul style="list-style-type: none"> <li>• <b>Determine an appropriate scale and make scale drawings; use scale drawings or models in applications.</b></li> </ul>	330A, 330B, 330, 331, 332, 333, 336, 337

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Solve simple problems involving rates and other derived measures (e.g., miles per hour, gms per cc or cm<sup>3</sup>).</li> </ul>	306A, 306B, 306, 307, 308, 309, 314, 315
<b>GEOMETRY</b>		
<p><b>1. Students analyze properties of objects and relationships among the properties.</b></p>	<ul style="list-style-type: none"> <li>• Analyze and describe geometric relationships among two- and three-dimensional figures (e.g., relationship between rectangles and squares, and between equilateral and isosceles triangles).</li> </ul>	476A, 476B, 476, 477, 478, 479, 480A, 480B, 480, 481, 482, 483, 484A, 484B, 484, 485, 486, 487, 492, 493, 494A, 494B, 494, 495, 496A, 496B, 496, 497, 498, 499, 500A, 500B, 500, 501, 502A, 502B, 502, 503, 504, 505, 506A, 506B, 506, 507, 508, 509, 510A, 510B, 510, 511, 516A, 516B, 516, 517, 518, 519, 522, 523, 564A, 564B, 564, 565, 566, 567, 568A, 568B, 568, 569, 570A, 570B, 570, 571, 572A, 572B, 572, 573, 574, 575, 576A, 576B, 576, 577, 578, 579, 580A, 580B, 580, 581, 584, 585, 594A, 594B, 594, 595, 596, 597, 600, 601
	<ul style="list-style-type: none"> <li>• Critique logical arguments concerning geometric ideas and relationships.</li> </ul>	484A, 484B, 484, 485, 486, 487

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Describe and apply geometric ideas and relationships to solve problems (e.g., Pythagorean theorem, similar triangles).</li> </ul>	496A, 496B, 496, 497, 498, 499, 504, 505
<p><b>2. Students use transformations and symmetry to analyze mathematical situations.</b></p>	<ul style="list-style-type: none"> <li>• Describe changes in size, position, and orientation of plane figures under dilation, reflection, rotation, and translation.</li> </ul>	510A, 510B, 510, 511, 514A, 514B, 514, 515, 522, 523
	<ul style="list-style-type: none"> <li>• Use reflectional and rotational symmetry to describe polygons and polyhedra.</li> </ul>	510A, 510B, 510, 511, 514A, 514B, 514, 515, 522, 523
	<ul style="list-style-type: none"> <li>• Describe changes in size, position, or orientation under compositions of transformations.</li> </ul>	510A, 510B, 510, 511, 514A, 514B, 514, 515, 522, 523
<p><b>3. Students use visualization and spatial reasoning to solve problems both within and outside of mathematics.</b></p>	<ul style="list-style-type: none"> <li>• Draw two-dimensional representations of three-dimensional objects.</li> </ul>	586B, 587, 593
	<ul style="list-style-type: none"> <li>• Compose and decompose two- and three-dimensional figures in order to solve problems and develop formulas (e.g., <math>(a + b)^2 = a^2 + 2ab + b^2</math>).</li> </ul>	564A, 564B, 564, 565, 566, 567, 568A, 568B, 568, 569, 572A, 572B, 572, 573, 574, 575, 576A, 576B, 576, 577, 578, 579, 580A, 580B, 580, 581, 584, 585, 590A, 590B, 590, 591, 592, 593, 594B, 595

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>4. Students select and use different representational systems, including coordinate geometry.</b>	<ul style="list-style-type: none"> <li>• Use coordinate geometry to describe geometric relationships and properties of geometric figures.</li> </ul>	440A, 440B, 440, 441, 442, 443, 452, 453, 471, 510A, 510B, 510, 511, 512A, 512B, 512
	<ul style="list-style-type: none"> <li>• Use relationships found in right triangles to solve problems (e.g., Pythagorean and sine, cosine, and tangent ratios).</li> </ul>	499
<b>PATTERNS, FUNCTIONS, AND ALGEBRA</b>		
<b>1. Students understand various types of patterns and functional relationships.</b>	<ul style="list-style-type: none"> <li>• Analyze, create, and generalize numeric and visual patterns including patterns that have a recursive nature (e.g., Pascal’s triangle, Fibonacci numbers, powers of rational numbers).</li> </ul>	8, 36, 37, 163, 212, 213, 444A, 444B, 444, 445, 446, 447, 499A, 499B, 496-499
	<ul style="list-style-type: none"> <li>• Use patterns to solve problems.</li> </ul>	444A, 444B, 444, 445, 446, 447
	<ul style="list-style-type: none"> <li>• Analyze and use linear relations among two variables.</li> </ul>	448A, 448B, 448, 449
<b>2. Students use symbolic forms to represent, model, and analyze mathematical situations.</b>	<ul style="list-style-type: none"> <li>• Represent and translate among a variety of patterns, relations and functions with tables, graphs, verbal rules, and symbolic rules.</li> </ul>	36, 37, 41, 42, 420, 444-447, 448, 449, 716, 718

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use symbolic algebra to represent and solve situations involving change, rates of change, linear equations, and inequalities.</li> </ul>	212A, 212B, 212, 213, 444A, 444B, 444, 445, 446, 447
	<ul style="list-style-type: none"> <li>• Relate slopes of line to constant rates of change.</li> </ul>	Related content: 450A, 450B, 450, 451
<b>DATA ANALYSIS, STATISTICS AND PROBABILITY</b>		
<b>1. Students pose questions and collect, organize, and represent data to answer those questions.</b>	<ul style="list-style-type: none"> <li>• Design experiments and surveys with consideration for issues of sampling (e.g., size, bias).</li> </ul>	620B, 620, 621, 623
	<ul style="list-style-type: none"> <li>• Describe different types of data and organize collections of data.</li> </ul>	440B, 440, 628B, 628, 629, 630, 631, 632A, 632B, 632, 633, 634, 636A, 636B, 636, 637, 638A, 638B, 638, 639, 640, 641, 642A, 642B, 642, 643, 644, 645, 648A, 648B, 648, 649, 652, 653
	<ul style="list-style-type: none"> <li>• Choose, create, and use various representations of data (e.g., histograms, stem and leaf plots, box and whisker plots).</li> </ul>	440B, 440, 628B, 628, 629, 630, 631, 632A, 632B, 632, 633, 634, 636A, 636B, 636, 637, 638A, 638B, 638, 639, 640, 641, 642A, 642B, 642, 643, 644, 645, 648A, 648B, 648, 649, 652, 653

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
<b>2. Students interpret data using methods of exploratory data analysis.</b>	<ul style="list-style-type: none"> <li>• Describe and interpret measures of the center of a data set and know which measure to use for particular situations.</li> </ul>	18B, 18, 624A, 624B, 624, 625, 626, 627, 634, 635
	<ul style="list-style-type: none"> <li>• Describe and interpret the spread of a set of data (e.g., range, quartile).</li> </ul>	18B, 18, 624A, 624B, 624, 625, 626, 627, 631, 634, 635
	<ul style="list-style-type: none"> <li>• Analyze and interpret relationships between variables (e.g., scatterplots).</li> </ul>	640
	<ul style="list-style-type: none"> <li>• Analyze different representations of the same data to determine effects of the representation.</li> </ul>	636A, 636B, 636, 637
<b>3. Students develop and evaluate inferences, predictions, and arguments that are based on data.</b>	<ul style="list-style-type: none"> <li>• Develop conclusions about a characteristic in the population.</li> </ul>	620B, 620-623
	<ul style="list-style-type: none"> <li>• Explain that differences in data may indicate an actual difference in the populations from which the data were collected or that the differences may result from random variation in the samples.</li> </ul>	620B, 620-623

Hawaii Standards	Hawaii Benchmarks	Scott Foresman – Addison Wesley Mathematics
	<ul style="list-style-type: none"> <li>• Use data to answer the questions that were posed, describe the limitations of those answers, and pose new questions that arise from the data.</li> </ul>	440B, 440, 628B, 628, 629, 630, 631, 632A, 632B, 632, 633, 634, 636A, 636B, 636, 637, 638A, 638B, 638, 639, 640, 641, 642A, 642B, 642, 643, 644, 645, 648A, 648B, 648, 649, 652, 653
<b>4. Students understand and apply basic notions of chance and probability.</b>	<ul style="list-style-type: none"> <li>• Judge the likelihood of uncertain events and connect these judgments to percents or proportions.</li> </ul>	654A, 654B, 654, 655, 656, 657, 658A, 658B, 658, 659, 660, 661, 662A, 662B, 662, 663, 664A, 664B, 664, 665, 666, 667, 668A, 668B, 668, 669, 670, 671, 672A, 672B, 672, 673, 678, 679
	<ul style="list-style-type: none"> <li>• Understand what it means for events to be equally likely and a game or process to be fair.</li> </ul>	654A, 654B, 654, 655, 656, 657, 658A, 658B, 658, 659, 660, 661, 662A, 662B, 662, 663, 664A, 664B, 664, 665, 666, 667, 668A, 668B, 668, 669, 670, 671, 672A, 672B, 672, 673, 678, 679
	<ul style="list-style-type: none"> <li>• Calculate theoretical probabilities based on assumptions about sample space, and compare with experimental results.</li> </ul>	664A, 664, 665, 666, 667