MATH*Connections* Correlation to the Hawaii Mathematics Content & Performance Standards, Geometry

NUMBERS AND OPERATIONS

Standard	Location/Page where Standard is found
Standard 1: Numbers and Operations: NUMBER SENSE: Understand numbers, ways of representing numbers, relationships among numbers, and number systems	
MA.G.1.1 Recognize situations that can be represented by vectors	**Not presented**
Standard 2: Numbers and Operations: OPERATION SENSE: Understand the meaning of operations and how they relate to each other	
There are no benchmarks for this standard for this Grade/Course.	
Standard 3: Numbers and Operations: COMPUTATION STRATEGIES: Use computational tools and strategies fluently and, when appropriate, use estimation	
MA.G.3.1 Use vector addition, subtraction, and scalar multiplication to solve problems	**Not presented**

MEASUREMENT

Standard	Location/Page where Standard is found
Standard 4: Measurement: FLUENCY WITH MEASUREMENT: Understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring	
MA.G.4.1 Use right triangle trigonometric ratios to solve for an unknown length of a side or the measure or an angle	**Book 2a:** pp. 221 – 270 **Book 2b:** pp. 312, 313, 345
MA.G.4.2 Solve problems using the formulas for perimeter, circumference, area, and volume of two- and three- dimensional figures and solids	**Book 2a:** pp. 15 – 23, 32 – 54, 60 – 65, 71, 72, 99 – 104, 190 – 199, 202 – 216 **Book 2b:** pp. 323 – 351, 380 – 382, 394 – 437 **Book 3a:** pp. 37, 38, 47 **Book 3b:** pp. 371 – 382
MA.G.4.3 Determine the effect of dimension changes to perimeter, area, and volume for common geometric figures and solids	**Book 1b:** pp. 336, 337, 342, 379 **Book 2a:** pp. 92, 93, 99 – 103, 200 – 214 **Book 3a:** pp. 37, 38, 47 **Book 3b:** pp. 371 – 382

GEOMETRY AND SPATIAL SENSE

Standard	Location/Page where Standard is found
Standard 5: Geometry and Spatial Sense: PROPERTIES AND RELATIONSHIPS: Analyze properties of objects and relationships among the properties	
MA.G.5.1 Use inductive and deductive reasoning to create and defend geometric conjectures	**Book 2a:** pp. 26, 31, 35, 40 – 42, 53, 68, 132, 157, 182, 183, 186, 189, 192, 193, 199, 228, 229, 237 – 239 **Book 2b:** pp. 325 – 332, 348, 356 – 358, 373 – 378, 410 – 418 **Book 3b:** pp. 392 – 394, 418 – 420, 454 – 457, 462, 545 – 600
MA.G.5.2 Use the concept of corresponding parts to prove that triangles, and other polygons, are congruent or similar	**Book 2a:** 122 – 125, 132, 133, 136, 173 – 175, 184 – 186, 200, 201
MA.G.5.3 Explain properties and characteristics of angle bisectors, perpendicular bisectors, and parallel lines	**Book 1a:** 196 – 201 **Book 2a:** 27 – 29, 157 – 166, 177, 184 – 186 **Book 2b:** 302 – 307
MA.G.5.4 Use the relationship between pairs of angles (e.g., complementary, supplementary, vertical, exterior, interior) to determine unknown angle measures or definitions of properties	**Book 2a:** 150 – 152, 161 – 166, 173, 177

GEOMETRY AND SPATIAL SENSE (CONTINUED)

MA.G.5.5 Apply the concepts of special right triangles to real-world situations	**Not presented**
MA.G.5.6 Use the relationships among properties of circles (e.g., chords, secants, tangents, arcs, circumference, radius, diameter, inscribed polygons) to solve problems	**Book 2b:** pp. 290 – 296, 298 – 307, 310, 311, 330 – 359
Standard 6: Geometry and Spatial Sense: TRANSFORMATIONS AND SYMMETRY: Use transformations and symmetry to analyze mathematical situations	
MA.G.6.1 Describe three-dimensional figures that are formed by translating two-dimensional figures	**Book 2b:** pp. 426 – 437, 458 – 461
Standard 7: Geometry and Spatial Sense: VISUAL AND SPATIAL SENSE: Use visualization and spatial reasoning to solve problems both within and outside of mathematics	
MA.G.7.1 Draw cross-sections, truncations, and compositions/decompositions of three-dimensional objects	**Book 2b:** pp. 388 – 392, 395 – 397
MA.G.7.2 Use concrete objects, pictorial representations, computer software, or graphing calculators to solve geometric problems	**Book 1b:** pp. 379, 380 **Book 2a:** pp. 4 – 6, 16, 17, 46, 52, 57 – 65, 89, 90, 100 – 102, 109, 127, 136, 180 – 182, 187 **Book 2b:** pp. 289, 295, 309 – 322, 340 – 345, 373 – 378, 381, 382, 390 – 392, 467 **Book 3a:** pp. 37 – 39
Standard 8: Geometry and Spatial Sense: REPRESENTATIONAL SYSTEMS: Select and use different representational systems, including coordinate geometry	
MA.G.8.1 Use coordinate geometry to produce formulas and prove theorems for the midpoint of a line segment, the distance formula, and forms of equations of lines and circles	**Book 1a:** pp. 183 – 201 **Book 2a:** pp. 54, 86 – 89, 180 – 182, 187 **Book 2b:** pp. 299 – 306, 315 – 322, 439 – 465
MA.G.8.2 Describe the concept of rigid motion on figures in the coordinate plane, including rotation, translation, and reflection	**Book 2a:** pp. 24 – 28, 36, 165, 166 **Book 2b:** pp. 289 – 291, 315 – 322

PATTERNS, FUNCTIONS, AND ALGEBRA

Standard	Location/Page where Standard is found
Standard 9: Patterns, Functions, and Algebra: PATTERNS AND FUNCTIONAL RELATIONSHIPS: Understand various types of patterns and functional relationships	
There are no benchmarks for this standard for this Grade/Course.	

DATA ANALYSIS, STATISTICS, AND PROBABILITY

Standard	Location/Page where Standard is found
Standard 10: Patterns, Functions, and Algebra: SYMBOLIC REPRESENTATION: Use symbolic forms to represent, model, and analyze mathematical situations	
There are no benchmarks for this standard for this Grade/Course.	
Standard 11: Data Analysis, Statistics, and Probability: FLUENCY WITH DATA: Pose questions and collect, organize, and represent data to answer those questions	
There are no benchmarks for this standard for this Grade/Course.	
Standard 12: Data Analysis, Statistics, and Probability: STATISTICS: Interpret data using methods of exploratory data analysis	
There are no benchmarks for this standard for this Grade/Course.	
Standard 13: Data Analysis, Statistics, and Probability: DATA ANALYSIS: Develop and evaluate inferences, predictions, and arguments that are based on data	
There are no benchmarks for this standard for this Grade/Course.	
Standard 14: Data Analysis, Statistics, and Probability: PROBABILITY: Understand and apply basic notions of chance and probability	
There are no benchmarks for this standard for this Grade/Course.	