GLENCOE/MCGRAW-HILL
MATHEMATICS CORRELATIONS
GEOMETRY
Mathematics New Generation Sunshine State Standards Crosswalk Correlations

Course Code 1206310

Course Category 6-12
Subject Area Mathematics
Course Type Core
Course Title Geometry
Course Level 2
Course Length Full Year
Credit
Description 1
Abbreviated
Title Geometry

RELATED BENCHMARKS (51) :		Lesson #	Page #
Scheme	Descriptor		
LA.1112.1.6.1	The student will use new vocabulary that is introduced and taught directly;	Throughout Text	
LA.1112.1.6.2	The student will listen to, read, and discuss familiar and conceptually challenging text;	Throughout Text	
LA.1112.1.6.5	The student will relate new vocabulary to familiar words;	Throughout Text	
LA.910.1.6.1	The student will use new vocabulary that is introduced and taught directly;	Throughout Text	
LA.910.1.6.2	The student will listen to, read, and discuss familiar and conceptually challenging text;	Throughout Text	
LA.910.1.6.5	The student will relate new vocabulary to familiar words;	Throughout Text	
MA.912.D.6.2	Find the converse, inverse, and contrapositive of a statement	2-3	
MA.912.D.6.3	Determine whether two propositions are logically equivalent.	2-3	

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RELATED BENCHMARKS (51) :		Lesson #	Page #
MA.912.D.6.4	Use methods of direct and indirect proof and determine whether a short proof is logically valid.	2-4, 2-5, 2-6, 2-7, 2-8	
MA.912.G.1.1	Find the lengths and midpoints of line segments in two-dimensional coordinate systems.	1-3	
MA.912.G.1.2	Construct congruent segments and angles, angle bisectors, and parallel and perpendicular lines using a straight edge and compass or a drawing program, explaining and justifying the process used.	1-2 through 1-5, p. 44 & 45, 3-5, p.236-237	
MA.912.G.1.3	Identify and use the relationships between special pairs of angles formed by parallel lines and transversals.	3-1 through 3-3 and 6-4	
MA.912.G.2.1	Identify and describe convex, concave, regular, and irregular polygons.	1-6, 11-3, 11-4	
MA.912.G.2.2	Determine the measures of interior and exterior angles of polygons, justifying the method used.	8-1	
MA.912.G.2.3	Use properties of congruent and similar polygons to solve mathematical or real-world problems.	Chapter 6 and 11-1 through 11-3	
MA.912.G.2.4	Apply transformations (translations, reflections, rotations, dilations, and scale factors) to polygons. to determine congruence, similarity, and symmetry. Know that images formed by translations, reflections, and rotations are congruent to the original shape. Create and verify tessellations of the plane using polygons.	Chapter 9 and 13-5	
MA.912.G.2.5	Explain the derivation and apply formulas for perimeter and area of polygons (triangles, quadrilaterals, pentagons, etc.).	1-6, 11-1 through 11-4	

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RELATED BENCHMARKS (51) :		Lesson #	Page #
MA.912.G.2.7	Determine how changes in dimensions affect the perimeter and area of common geometric figures.	11-1 through 11-4	
MA.912.G.3.1	Describe, classify, and compare relationships among quadrilaterals including the square, rectangle, rhombus, parallelogram, trapezoid, and kite.	Chapter 8	
MA.912.G.3.2	Compare and contrast special quadrilaterals on the basis of their properties.	p. 435, 446, and 8-7	
MA.912.G.3.3	Use coordinate geometry to prove properties of congruent, regular and similar quadrilaterals.	8-7	
MA.912.G.3.4	Prove theorems involving quadrilaterals.	Chapter 8	
MA.912.G.4.1	Classify, construct, and describe triangles that are right, acute, obtuse, scalene, isosceles, equilateral, and equiangular.	4-1 through 4-3 and p. 184 & 199	
MA.912.G.4.2	Define, identify, and construct altitudes, medians, angle bisectors, perpendicular bisectors,orthocenter, centroid, incenter, and circumcenter.	5-1	
MA.912.G.4.3	Construct triangles congruent to given triangles.	4-3, 4-4, 6-2 through 6-5	
MA.912.G.4.4	Use properties of congruent and similar triangles to solve problems involving lengths and areas.	6-2 through 6-5 and 11-1 through 11-3	
MA.912.G.4.5	Apply theorems involving segments divided proportionally.	6-1 through 6-6 and 7-1	
MA.912.G.4.6	Prove that triangles are congruent or similar and use the concept of corresponding parts of congruent triangles.	4-3 through 4-5 and p. 214/215, and 6-2 through 6-5	

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RELATED BENCHMARKS (51) :		Lesson #	Page #
MA.912.G.4.7	Apply the inequality theorems: triangle inequality, inequality in one triangle, and the Hinge Theorem.	5-5	
MA.912.G.5.1	Prove and apply the Pythagorean Theorem and its converse.	7-2	
MA.912.G.5.2	State and apply the relationships that exist when the altitude is drawn to the hypotenuse of a right triangle.	7-1	
MA.912.G.5.3	Use special right triangles (30° - 60° - 90° and 45° - 45° - 90°) to solve problems.	7-3	
MA.912.G.5.4	Solve real-world problems involving right triangles.	Chapter 7	
MA.912.G.6.2	Define and identify: circumference, radius, diameter, arc, arc length, chord, secant, tangent and concentric circles.	10-1 through 10-7	
MA.912.G.6.4	Determine and use measures of arcs and related angles (central, inscribed, and intersections of secants and tangents).	10-2 through 10-6	
MA.912.G.6.5	Solve real-world problems using measures of circumference, arc length, and areas of circles and sectors.	10-1 through 10-3, 11-3, 11-5	
MA.912.G.6.6	Given the center and the radius, find the equation of a circle in the coordinate plane or given the equation of a circle in center-radius form, state the center and the radius of the circle.	10-8	
MA.912.G.6.7	Given the equation of a circle in center-radius form or given the center and the radius of a circle, sketch the graph of the circle.	10-8	

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RELATED BENCHMARKS (51) :		Lesson #	Page #
MA.912.G.7.1	Describe and make regular, non-regular, and oblique polyhedra and sketch the net for a given polyhedron and vice versa.	12-1 & 12-2	
MA.912.G.7.2	Describe the relationships between the faces, edges, and vertices of polyhedra.	12-1 & 12-2	
MA.912.G.7.4	Identify chords, tangents, radii, and great circles of spheres	12-7	
MA.912.G.7.5	Explain and use formulas for lateral area, surface area, and volume of solids.	Chapter 12 & 13	
MA.912.G.7.6	Identify and use properties of congruent and similar solids.	13-4	
MA.912.G.7.7	Determine how changes in dimensions affect the surface area and volume of common geometric solids.	12-2 through 12-7 and 13-1 through 13-3	
MA.912.G.8.1	Analyze the structure of Euclidean geometry as an axiomatic system. Distinguish between undefined terms, definitions, postulates and theorems.	1-1 and 2-5	
MA.912.G.8.2	Use a variety of problem-solving strategies, such as drawing a diagram, making a chart, guess-and-check, solving a simpler problem, writing an equation, and working backwards.	782-784 & Througout book "Critical Thinking"	
MA.912.G.8.3	Determine whether a solution is reasonable in the context of the original situation.	"Critical Thinking "Activities throughout book & "Find the Error" activities throughout book	
MA.912.G.8.4	Make conjectures with justifications about geometric ideas. Distinguish between information that supports a conjecture and the proof of a conjecture.	2-1 and p. 324	

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RELATED BENCHMARKS (51) :		Lesson #	Page #
MA.912.G.8.5	Write geometric proofs, including proofs by contradiction and proofs involving coordinate geometry. Use and compare a variety of ways to present deductive proofs, such as flow charts, paragraphs, two-column, and indirect proofs.	SEE "Proofs" in Index-in every chapter	
MA.912.G.8.6	Perform basic constructions using straightedge and compass, and/or drawing programs describing and justifying the procedures used. Distinguish between sketching, constructing and drawing geometric figures.	Throughout text: 15, 24, 31-33, 44, 151, 200, 202, 207, 236-237, 311, 314, 425, 433, 435, 438, 441, 444, 541-542, 554, 556, 559-560, 577	
MA.912.T.2.1	Define and use the trigonometric ratios (sine, cosine, tangent, cotangent, secant, cosecant) in terms of angles of right triangles.	3-4 through 3-7, p. 391	

*check www.glencoe.com for additional supplemental lessons online