

Math 10 (updated June 2006)

Geometry Concepts and Applications by Cummins, et. al, Glencoe 2001

Time Frame	Content	Skills	GSE	Assessment	Text	
Month 1	Reasoning in Geometry					Chapter 1
	Patterns and Inductive Reasoning	Find the next three terms of a given sequence. Draw the next figure in a given pattern.				1-1
	Points, Lines, and Planes	Name points, lines, and planes using symbols and sketch.				1-2
	Postulates	Apply the postulates to answers questions relating to given diagrams.				1-3
	Conditional Statements and Their Converses	Identify the hypothesis and conclusion of a conditional statement. Write the converse to a conditional statement.				1-4
	Tools of the Trade	Use a straightedge to determine whether segments are straight or maybe joined as viewed in an optical illusion. Use a compass to determine comparative lengths of segments.				1-5
	A Plan for Problem Solving	Use perimeter and area formulas of rectangles and parallelograms in problem solving applications. Solve one-step equations.		M(G&M)-10-6		
	Segment Measure and Coordinate Graphing					Chapter 2
	Real Numbers and Number Lines	Identify the coordinates of points on a number line. Use absolute value to determine the length of a segment.				2-1
	Segments and Properties of Real Numbers	Apply the definition of betweenness to answer questions about the relative positions of points on a number line and to find segment lengths.				2-2
	Congruent Segments	Use the congruent symbol to identify congruent segments. Apply the definitions of congruent segments, midpoint, and segment bisector to answer questions pertaining to a number line. Solve multistep equations.		M(G&M)-10-2		2-3
	The Coordinate Plane	Plot points. Graph horizontal and vertical lines.		M(F&A)-10-2		2-4
	Midpoints	Apply the midpoint formula to determine the midpoint of a segment given the coordinates of its endpoints.		M(G&M)-10-8		2-5

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Month 2	Angles				Chapter 3
	Angles	Name an angle and its parts using appropriate symbols.			3-1
	Angle Measure	Use a protractor to measure angles. Classify angles as being acute, right, or obtuse.			3-2
	The Angle Addition Postulate	Use the angle addition postulate to find angle measures. Solve multi-step equations.			3-3
	Adjacent Angles and Linear Pairs of Angles	Use the terms adjacent and linear pair to describe pairs of angles in as many ways possible.	M(G&M)-10-2		3-4
	Complementary and Supplementary Angles	Apply the definitions of complementary and supplementary to a given diagram to answer questions. Solve multi-step equations.	M(G&M)-10-2		3-5
	Congruent Angles	Use the congruent symbol to identify congruent angles. Apply the definition of vertical angles to a given diagram to answer questions.	M(G&M)-10-2		3-6
	Perpendicular Lines	Identify perpendicular lines using the appropriate symbol. Solve multi-step equations.	M(G&M)-10-2		3-7
	Parallels				Chapter 4
	Parallel Lines and Planes	Identify parallel lines using the appropriate symbol. Identify skew lines.	M(G&M)-10-2		4-1
	Parallel Lines and Transversals	Identify a transversal. Determine whether angles are interior or exterior. Identify special angle pairs:(1)alternate interior angles, (2)alternate exterior angles, (3)consecutive interior angles. When parallel lines are cut by a transversal, apply the appropriate theorems to a given diagram to find the measures of angles. Solve multi-step equations.	M(G&M)-10-2		4-2
	Transversals and Corresponding Angles	Identify corresponding angles. Apply the postulate of corresponding angles formed when a pair of parallel lines is cut by a transversal to a given diagram to find the measures of angles. Solve multi-step equations.	M(G&M)-10-2		4-3

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	Proving Lines Parallel	Use the theorems pertaining to alternate interior angles, alternate exterior angles, and consecutive interior angles, and the postulate of corresponding angles to determine whether a given pair of lines is parallel. Solve multi-step equations.	M(G&M)-10-2		4-4
	Slope	Apply the slope formula to determine the slope of a line containing two points whose coordinates are given. Compare the slopes of distinct nonvertical lines to determine whether they are parallel, perpendicular, or intersecting.	M(F&A)-10-2		4-5
	Equations of Lines	Name the slope and y-intercept of a linear equation. Write a linear equation in slope-intercept form for a given linear equation. Write an equation of a line satisfying any given conditions.	M(F&A)-10-2		4-6
Month 3	Triangles and Congruence				Chapter 5
	Classifying Triangles	Name a triangle using the appropriate symbol. Identify the parts of a triangle. Classify triangles by angles (acute, right, obtuse). Classify triangles by sides (scalene, isosceles, equilateral). Identify the parts of an isosceles triangle (legs, base, base angles, vertex angle).			5-1
	Angles of a Triangle	Angle Sum Theorem of a Triangle. Solve multi-step equations. Identify an equiangular triangle.			5-2
	Geometry in Motion	Determine whether the motion of a triangle is a translation, reflection, or rotation. Complete a mapping statement using the appropriate symbol. Use the terms preimage and image to differentiate between the corresponding parts of a mapping.	M(F&A)-10-4		5-3
	Congruent Triangles	Definition of congruent triangles. Identify the corresponding parts of congruent triangles. Complete a triangle congruence statement using the appropriate symbol. Solve multi-step equations.			5-4
	SSS and SAS	Use the SSS and SAS Postulates to determine whether triangles are congruent.			5-5

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	ASA and AAS	Use the ASA and AAS Postulates to determine whether triangles are congruent.			5-6
	More About Triangles				
	Medians	Identify the medians and centroid of a triangle. Apply Theorem 6-1 to find the lengths of a median formed by the centroid. Solve multi-step equations.			6-1
	Altitudes and Perpendicular Bisectors	Identify the altitudes of a triangle. Identify the perpendicular bisector of the side of a triangle.			6-2
	Angle Bisectors and Triangles	Identify the angle bisector of a triangle. Solve multi-step equations.			6-3
	Isosceles Triangles	Identify the congruent parts of an isosceles triangle. Apply the theorem regarding the median drawn from the vertex angle of an isosceles triangle. Solve multi-step equations.			6-4
	Right Triangles	Identify the parts of a right triangle. Apply the LL, HA, LA Theorems and the HL Postulate to determine whether right triangles are congruent.			6-5
	The Pythagorean Theorem	Apply the Pythagorean Theorem to find the missing length of the side of a right triangle. Apply the Converse of the Pythagorean Theorem to determine whether a triangle whose side lengths are given is a right triangle.	M(G&N)-10-2		6-6
	Distance on the Coordinate Plane	Apply the distance formula to find the length of a line segment whose endpoint coordinates are given.	M(G&M)-10-8		6-7
Month 4	Triangle Inequalities				
	Segments, Angles, and Inequalities	Apply inequalities to segment and angle measures			7-1
	Exterior Angle Theorem	Identify exterior angles and remote interior angles of a triangle and use the Exterior Angle Theorem			7-2
	Inequalities Within a Triangle	Identify relationships between the sides and angles of a triangle			7-3
	Triangle Inequality Theorem	Identify and use the Triangle Inequality Theorem	M(G&M)-10-2		7-4
	Quadrilaterals				
	Chapter 8				

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	Quadrilaterals	Identify parts of a quadrilateral and find the sum of the measures of the interior angles of a quadrilateral			8-1	
	Parallelograms	Identify and use properties of a parallelogram			8-2	
	Tests for Parallelograms	Identify and use tests to show that a quadrilateral is a parallelogram			8-3	
	Rectangles, Rhombi, and Squares	Identify and use the properties of rectangles, rhombi and squares			8-4	
	Trapezoids	Identify and use the properties of trapezoids and isosceles trapezoids			8-5	
Month 5	Proportions and Similarity				Chapter 9	
	Using Ratios and Proportions	Use ratios and proportions to solve problems			9-1	
	Similar Polygons	Identify similar polygons		9-2		
	Similar Triangles	Use AA, SSS, and SAS similarity tests for triangles		9-3		
	Proportional Parts and Triangles	Identify and use the relationships between proportional parts of similar triangles		9-4		
	Triangles and Parallel Lines	Use proportions to determine whether lines are parallel to sides of triangles		9-5		
	Proportional Parts and Parallel Lines	Identify and use the relationship between parallel lines and proportional parts		9-6		
	Perimeters and Similarities	Identify and use the proportion relationships of similar triangles		9-7		