

Geometry Syllabus - Semester 1

Concepts and Skills	Sect.	State Standard
PERFORM CONGRUENCE TRANSFORMATIONS		
Relate transformations and congruence	4.3	[SS12.2.3b]
Perform congruence transformations	4.9	[SS12.2.3b]
Perform transformations	9.1	[SS12.2.3a, 12.2.4a]
Perform reflections	9.3	[SS12.2.3a, 12.2.4a]
Perform rotations	9.4	[SS12.2.3a, 12.2.4a]
Apply compositions of transformations	9.5	[SS12.2.3b]
USE SEGMENT POSTULATES AND FORMULAS		
Identify points, lines, and planes	1.1	[SS12.2.1a]
Use segments and congruence	1.2	[SS12.2.1a]
Use midpoint and distance formulas	1.3	[SS12.2.2b, 12.2.2c] DK 2&3
Test 9 and 1a		
UNDERSTAND ANGLES AND POLYGONS		
Measure and classify angles	1.4	[SS12.2.4a, 12.2.2b]
Describe angle pair relationships	1.5	
Identify and classify polygons	1.6	[SS12.2.1a]
APPLY INDUCTIVE AND DEDUCTIVE REASONING		
Use inductive reasoning	2.1	
Analyze conditional statements	2.2	[SS12.2.2b]
Apply deductive reasoning to form logical arguments	2.3	[SS12.2.2c] DK 2&3
Test 1b and 2a -- Cumulative 9, 1, and 2a		
UNDERSTAND GEOMETRIC RELATIONSHIPS AND WRITING PROOFS		
Use postulates and diagrams	2.4	
Reason using algebraic properties	2.5	
Prove statements about segments and angles	2.6	[SS12.2.1a]
Prove angle pair relationships	2.7	[SS12.2.1a]
USE LINES AND ANGLES		
Identify pairs of lines and angles	3.1	[SS12.2.1f]
• Use parallel lines and transversals	3.2	[SS12.2.1c, 12.2.1d, 12.2.2c] DK2&3
• Prove lines are parallel	3.3	[SS12.2.1c, 12.2.1d, 12.2.4a] DK2&3
• Prove theorems about perpendicular lines	3.6	[SS12.2.1c, 12.2.2c, 12.2.4a] DK 2&3
Test 2b and 3		
MEASURES OF TRIANGLES AND TRANSFORMATIONS OF POLYGONS		
• Apply triangle sum properties	4.1	[SS12.2.2a, 12.2.1c, 12.2.1d, 12.2.2d] DK2&3
• Apply congruence and triangles	4.2	[SS12.2.1c, 12.2.2c] DK 2&3
PROVE AND USE TRIANGLE CONGRUENCE		
• Prove triangles are congruent: SSS	4.4	[SS12.2.1c, 12.2.1d, 12.2.2a, 12.2.2b, 12.2.2c, 12.2.4a] DK2&3
• Prove triangles are congruent: SAS, HL	4.5	[SS12.2.1c, 12.2.1d] DK2&3
• Prove triangles are congruent: ASA, AAS	4.6	[SS12.2.2a] DK 2&3
Use congruent triangles to write proofs	4.7	[SS 12.2.4a]
• Use theorems about isosceles and equilateral triangles	4.8	[SS12.2.1c, SS12.2.2d] DK2&3
Test 4 -- Cumulative 2b, 3 and 4		
USE SIMILARITY IN POLYGONS		
• Use similar polygons	6.1	[SS12.2.1c, 12.2.1d, 12.2.4b] DK 2&3
Relate Transformations and similarity	6.2	
• Prove triangles similar by AA	6.3	[SS12.2.4b] DK 2&3
Prove triangles similar by SSS and SAS	6.4	[SS12.2.1c]
USE PROPORTIONALITY AND PERFORM DILATIONS		
Use proportionality Theorems	6.5	[SS12.2.1c, 12.2.3a, 12.2.4a]
Perform similarity transformations	6.6	
Identify symmetry	9.6	
Identify and perform dilations	9.7	[SS12.2.3a, 12.2.3b, 12.2.4a]
Test 6		

Geometry Syllabus - Semester 2

Concepts and Skills	Sect.	State Standard
IDENTIFY AND USE SPECIAL SEGMENTS IN TRIANGLES		
• Use midsegments; Write coordinate proofs	5.1	[SS12.2.1c, SS 12.2.2a, 12.2.2b, 12.2.2c, 12.2.4b] DK2&3
• Use properties of perpendicular bisectors	5.2	[SS12.2.1c, 12.2.1d, 12.2.4a, 12.2.4b] DK 2&3
• Use angles bisectors of triangles	5.3	[SS12.2.1c, 12.2.1d, 12.2.2b, 12.2.4a, 12.2.4b] DK 2&3
• Use medians and altitudes of triangles	5.4	[SS12.2.1c, 12.2.1d, 12.2.2a, 12.2.4a, 12.2.4b] DK 2&3
Test 5		
TRIANGLE PROPERTIES		
• Use inequalities in a triangle	5.5	[SS12.2.1c, 12.2.1d, 12.2.2a, 12.2.3a, 12.2.4b] DK 2&3
• Use the Pythagorean Theorem to find side lengths	7.1	[SS12.2.1c, 12.2.1e] DK 1-3
• Use the converse of the Pythagorean Theorem to determine if a triangle is right	7.2	[SS12.2.1b, 12.2.1e, 12.2.2d] DK 1-3
SOLVE RIGHT TRIANGLES		
• Use the relationships among the sides in special right triangles	7.4	[SS12.2.1e, 12.2.2d] DK 1-3
• Apply the tangent ratio	7.5	[SS12.2.1e] DK 1-3
• Apply the sine and cosine ratios	7.6	[SS12.2.1e] DK 1-3
• Solve Right Triangles	7.7	[SS12.2.1e, 12.2.3a] DK 1-3
Test 7 -- Cumulative 5 & 7		
USE ANGLE RELATIONSHIPS IN POLYGONS		
Find angle measures in polygons	8.1	
Find slopes of parallel and perpendicular lines	3.4	
• Use properties of parallelograms	8.2	[SS12.2.1b, 12.2.2b, 12.2.2d] DK 2&3
USE PROPERTIES OF QUADRILATERALS AND PARALLELOGRAMS		
• Show that a quadrilateral is a parallelogram	8.3	[SS12.2.1b, 12.2.2d] DK 2&3
• Use properties of rhombuses, rectangles, and squares	8.4	[SS12.2.1b, 12.2.2d] DK 2&3
• Use properties of trapezoids	8.5	[SS12.2.1b, 12.2.2d] DK 2&3
• Identify special quadrilaterals	8.6	[SS12.2.2d] DK 2&3
Test 8		
LINES AND ARCS IN CIRCLES		
Use properties of tangents	10.1	[SS12.2.1g]
Find arc measure	10.2	[SS12.2.1g]
Apply properties of chords	10.3	[SS12.2.1g, 12.2.4a]
ANGLES AND SEGMENTS IN CIRCLES		
Use inscribed angles and polygons	10.4	[SS12.2.1g, 12.2.3b, 12.2.4a]
Apply other angle relationships in circles	10.5	[SS12.2.1g]
Find segment lengths in circles	10.6	[SS12.2.1g]
Test 10 -- Cumulative 8 & 10		
COMPARE AND USE MEASURES FOR PARTS OF CIRCLES AND WHOLE CIRCLES		
Find circumference and arc length	11.1	[SS12.2.5e]
Find areas of circles and sectors	11.2	[SS12.2.5e]
Find areas of regular polygons	11.3	[SS12.2.4a]
EXPLORE THREE-DIMENSIONAL FIGURES		
Explore solids	11.5	[SS12.2.1b]
• Find volume of prisms and cylinders	11.6	[SS12.2.4b, 12.2.5a, 12.2.5b, 12.2.5f] DK 2&3
• Find volume of pyramids and cones	11.7	[SS12.2.1b, 12.2.4b, 12.2.5a, 12.2.5f] DK 2&3
• Find volume of spheres	11.8	[SS12.2.5a, 12.2.5b, 12.2.5f] DK 2&3
Explore similar solids	11.9	[SS12.2.5a, 12.2.5b, 12.2.5f, 12.2.5g]
Test 11		
SS= State Standard • = State Standard that is assessed DK = Depth of Knowledge assessed		