Geometry - OAS Standards Aligned to MVP Curriculum

*This document is for MVP *lessons* only. It does not account for the Ready, Set, Go Practice Problems.

OAS-M Red Indicates no corresponding MVP lesson.			Corresponding MVP Lesson(s) Corresponding OK Framework
Reasoning & Logic (G.RL.)			
G.RL.1 Use appropriate tools and logic to evaluate mathematical arguments	**G.RL.1.1**	Understand the use of undefined terms, definitions, postulates, and theorems in logical arguments/proofs.	1.1, 1.2, 1.4, 3.2, 3.3
	G.RL.1.2	Analyze and draw conclusions based on a set of conditions using inductive and deductive reasoning. Recognize the logical relationships between a conditional statement and its inverse, converse, and contrapositive.	3.1, 3.2
	G.RL.1.3	Assess the validity of a logical argument and give counterexamples to disprove a statement.	A2.3.6
Geometry: Tow-Dimensional Shapes (G.2D)			
G.2D.1 Discover, evaluate and analyze the relationships between lines, angles, and polygons to solve real-world and mathematical problems; express proofs in a form that clearly justifies the reasoning, such as two-column proofs, paragraph proofs, flow charts, or illustrations.	**G.2D.1.1**	Apply the properties of parallel and perpendicular lines, including properties of angles formed by a transversal, to solve real-world and mathematical problems and determine if two lines are parallel, using algebraic reasoning and proofs.	3.4, 3.5, 3.7, 4.3, 4.4, 4.5
	G.2D.1.2	Apply the properties of angles, including corresponding, exterior, interior, vertical, complementary, and supplementary angles to solve real-world and mathematical problems using algebraic reasoning and proofs.	3.4, 3.5, 3.6, 3.7, 4.4, 4.5, 4.7
	G.2D.1.3	Apply theorems involving the interior and exterior angle sums of polygons and use them to solve real-world and mathematical problems using algebraic reasoning and proofs.	3.1, 3.2, 3.8
	G.2D.1.4	Apply the properties of special quadrilaterals (square, rectangle, trapezoid, isosceles trapezoid, rhombus, kite, parallelogram) and use them to solve real-world and mathematical problems involving angle measures and segment lengths using algebraic reasoning and proofs.	1.5, 1.6, 1.7, 3.2, 3.7, 3.8, 4.6
	G.2D.1.5	Use coordinate geometry to represent and analyze line segments and polygons, including determining lengths, midpoints, and slopes of line segments.	6.1, 6.2, 6.3
	G.2D.1.6	Apply the properties of polygons to solve real-world and mathematical problems involving perimeter and area (e.g., triangles, special quadrilaterals, regular polygons up to 12 sides, composite figures).	5.4, 6.1

	G.2D.1.7	Apply the properties of congruent or similar polygons to solve real-world and mathematical problems using algebraic and logical reasoning.	2.4, 4.2, 4.3, 4.4, 4.5
	G.2D.1.8	Construct logical arguments to prove triangle congruence (SSS, SAS, ASA, AAS and HL) and triangle similarity (AA, SSS, SAS).	2.4, 2.5
	G.2D.1.9	Use numeric, graphic and algebraic representations of transformations in two dimensions, such as reflections, translations, dilations, and rotations about the origin by multiples of 90̊ , to solve problems involving figures on a coordinate plane and identify types of symmetry.	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.3, 2.4, 3.3, 4.1
Geometry: Three-Dimensional Shapes (G.3D)			
G.3D.1 Solve real-world and mathematical problems involving three-dimensional figures.	**G.3D.1.1**	Solve real-world and mathematical problems using the surface area and volume of prisms, cylinders, pyramids, cones, spheres, and composites of these figures. Use nets, measuring devices, or formulas as appropriate.	7.4
	G.3D.1.2	Use ratios derived from similar three-dimensional figures to make conjectures, generalize, and to solve for unknown values such as angles, side lengths, perimeter or circumference of a face, area of a face, and volume.	5.10, 5.11
Geometry: Circles (G.C)			
G.C.1 Solve real-world and mathematical problems using the properties of circles.	**G.C.1.1**	Apply the properties of circles to solve problems involving circumference and area, approximate values and in terms of π, using algebraic and logical reasoning.	Unit 9, Big Idea 1
	G.C.1.2	Apply the properties of circles and relationships among angles; arcs; and distances in a circle among radii, chords, secants and tangents to solve problems using algebraic and logical reasoning.	3.2, 5.3, 5.6
	G.C.1.3	Recognize and write the radius r , center (h,k), and standard form of the equation of a circle $(x - h)^2 + (y - k)^2 = r^2$ with and without graphs.	6.4, 6.5, 6.6
	G.C.1.4	Apply the distance and midpoint formula, where appropriate, to develop the equation of a circle in standard form.	6.4
Geometry: Right Triangle Trigonometry			
G.RT.1 Develop and verify mathematical relationships of right triangles and	**G.RT.1.1**	Apply the distance formula and the Pythagorean Theorem and its converse to solve real-world and mathematical problems, as approximate and exact values, using algebraic and logical reasoning (include Pythagorean Triples).	4.9, 4.10, 4.11
	G.RT.1.2	Verify and apply properties of right triangles, including properties of 45-45-90 and 30-60-90 triangles, to solve problems using algebraic and apply properties of right triangles, including properties of 45-45-90 and 30-60-90 triangles, to solve problems using algebraic and logical reasoning.	4.8, 7.5

trigonometric ratios to solve real-world and mathematical problems.	**G.RT.1.3**	Use the definition of the trigonometric functions to determine the sine, cosine, and tangent ratio of an acute angle in a right triangle. Apply the inverse trigonometric functions to find the measure of an acute angle in right triangles.	4.8, 4.9, 4.10, 4.11
	G.RT.1.4	Apply the trigonometric functions as ratios (sine, cosine, and tangent) to find side lengths in right triangles in real-world and mathematical problems.	4.8, 4.9, 4.10, 4.11