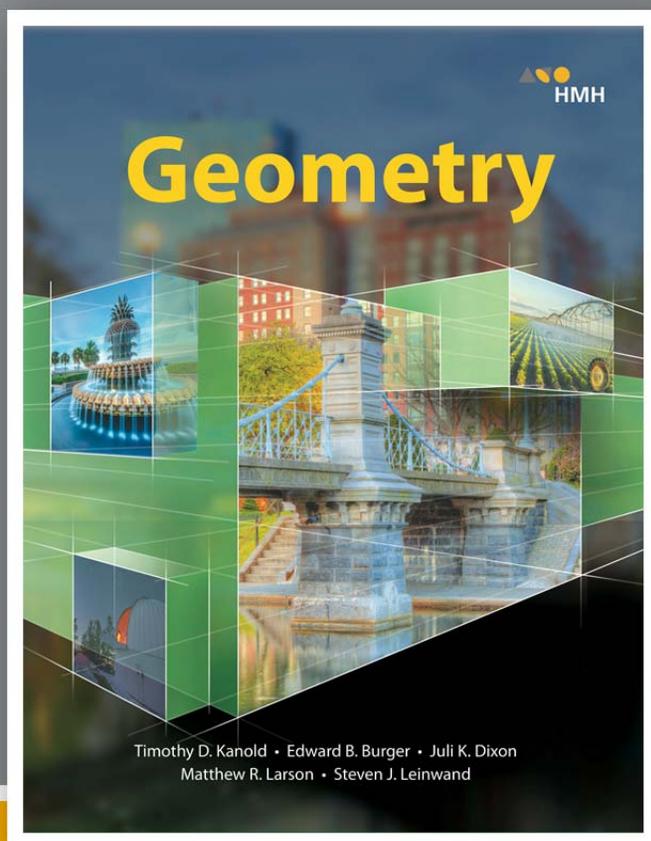


Correlation to the Oklahoma Academic Standards for Mathematics Geometry



Houghton Mifflin Harcourt
Oklahoma Geometry ©2019

Houghton Mifflin Harcourt Publishers
Oklahoma Geometry ©2019

correlated to the

Oklahoma Academic Standards for Mathematics
Geometry

Citations	Standard	Descriptor
Geometry: Reasoning & Logic (G.RL)		
G.RL.1 Use appropriate tools and logic to evaluate mathematical arguments.		
SE: 5-16, 39-48	G.RL.1.1	Understand the use of undefined terms, definitions, postulates, and theorems in logical arguments/proofs.
SE: 39-48, 161-168, 193 OK Planning Guide: 48A-48H	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.
SE: 39-48	G.RL.1.3	Assess the validity of a logical argument and give counterexamples to disprove a statement.
Geometry: Two-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.		
SE: 153-160, 161-168, 169-178, 179-184, 425-434, 435-444	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.
SE: 145-152, 153-160, 271-282	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.
SE: 271-282	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.

Houghton Mifflin Harcourt *Oklahoma Geometry* © 2019 correlated to
The Oklahoma Academic Standards for Mathematics, Geometry

Citations	Standard	Descriptor
SE: 361-370, 371-382, 383-392, 393-402, 403-416	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.
SE: 445-456, 457-464	G.2D.1.5	Use coordinate geometry to represent and analyze line segments and polygons, including determining lengths, midpoints, and slopes of line segments.
SE: 363, 369, 370, 391, 392, 446-447, 465-476	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).
SE: 123-132, 283-292, 511-518, 537-546, 555-562, 563-572	G.2D.1.7	Apply the properties of congruent or similar polygons to solve real-world and mathematical problems using algebraic and logical reasoning.
SE: 201-210, 211-220, 221-230, 237-244, 245-254, 255-262, 283-292, 519-528, 555-562	G.2D.1.8	Construct logical arguments to prove triangle congruence (SSS, SAS, ASA, AAS and HL) and triangle similarity (AA, SSS, SAS).
SE: 27-38, 55-64, 65-76, 77-88, 89-96, 103-112, 113-122, 489-498, 499-510	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 90° , to solve problems involving figures on a coordinate plane and identify types of symmetry.
Geometry: Three-Dimensional Shapes (G.3D)		
G.3D.1 Solve real-world and mathematical problems involving three-dimensional figures.		
SE: 779-790, 791-800, 801-810, 811-818, 833-842, 843-854, 855-860	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.
SE: 867-874 OK Planning Guide: 874A-874C	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.

Houghton Mifflin Harcourt *Oklahoma Geometry* © 2019 correlated to
The Oklahoma Academic Standards for Mathematics, Geometry

Citations	Standard	Descriptor
Geometry: Circles (G.C)		
G.C.1 Solve real-world and mathematical problems using the properties of circles.		
SE: 719-728	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.
SE: 659-668, 669-678, 679-686, 687-698, 699-710	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.
SE: 751-758 OK Planning Guide: 758A-758B	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.
SE: 751-758 OK Planning Guide: 758A-758B	G.C.1.4	Apply the distance and midpoint formula, where appropriate, to develop the equation of a circle in standard form.
Geometry: Right Triangle Trigonometry (G.RT)		
G.RT.1 Develop and verify mathematical relationships of right triangles and trigonometric ratios to solve real-world and mathematical problems.		
SE: 5-16, 445-456, 457-464, 603-612	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).
SE: 563-572, 585-592, 593-602, 603-612, 613-622	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 logical reasoning.
SE: 585-592, 593-602	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 as ratios to find the measure of an acute angle in right triangles.
SE: 585-592, 593-602 603-612, 613-622	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.