

Geometry B Scope and Sequence

Suggested timeline	CCSS	Learning Target: Students will	Resources
Week 1	G.CO.C.11 Prove theorems about parallelograms. G.SRT.B.5 Use congruence criteria for triangles to solve problems and to prove relationships in geometric figures.	Find the sum of the angle measures in a polygon. Apply properties of parallelograms. Find the sum of the angle measures in a polygon. Apply properties of parallelograms.	6.1-6.6
Week 2	G.GPE.A.4 Use coordinates to prove simple geometric theorems algebraically. G.SRT.A.5 Use coordinates to compute perimeters of polygons. G.GPE.B.5 Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems.	Use the coordinate plane to classify polygons. Use coordinate geometry to determine relationships involving lines, angles, and figures.	6.7-6.8
Week 3	G.SRT.B.5 Use similarity criteria for triangles to solve problems and to prove relationships in geometric figures. G.GPE.A.5 Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems. G.GPE.A.7 Use coordinates to compute perimeters of polygons.	Identify and work with similar figures and understand how they can be used to solve problems. Use perpendicular lines, including the perpendicular bisector of a line segment.	7.1-7.3
Week 4	G.CO.D.12 Make formal geometric constructions with a variety of tools . . . constructing perpendicular lines, including the perpendicular bisector of a line segment. . . . G.SRT.B.4 Prove theorems about triangles. theorems include: a line parallel to one side of a triangle divides the other two proportionally and conversely	Construct triangles to help solve problems and prove theorems about triangles and side and angle relationships.	7.4-7.5
Week 5	G.SRT.C.6 Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles. G.SRT.C.7 Explain and use the relationship between the sine and cosine of complementary angles. G.SRT.C.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. G.SRT.C.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. G.SRT.D.11 Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).	Solve problems using trigonometric ratios. Use the Law of Sines and the Law of Cosines to solve problems.	8.1-8.3

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Week 6	<p>G.CO.A.2 Represent transformations in the plane using . . . compare transformations that preserve distance and angle to those that do not.</p> <p>G.CO.A.5 Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.</p> <p>G.CO.B.6 Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure</p>	Perform translations, reflections, and rotations in the coordinate plane.	9.1-9.4
Week 7	<p>G.CO.A.5 Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.</p> <p>G.CO.B.6 Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure.</p> <p>G.CO.B.7 Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.</p> <p>G.CO.B.8 Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.</p>	Find congruence transformations given the coordinates of the preimage and the image.	9.5
Week 8	<p>G.SRT.A.1.b The dilation of a line segment is longer or shorter in the ratio given by the scale factor.</p> <p>G.SRT.A.2 Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar.</p> <p>G.SRT.A.3 Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.</p>	Work with dilations of figures and scale factors. Perform similar transformations to decide if they are similar.	9.6-9.7
Week 9	<p>G.SRT.A.9 Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle.</p> <p>G.GPE.B.7 Use coordinates to compute areas of triangles and rectangles.</p> <p>G.MG.A.1 Use geometric shapes and their measures to describe objects.</p>	Students find the areas of regular polygons, including the areas of triangles. They also find the perimeters and areas of similar figures.	10.3-10.5

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Week 10	<p>G.C.A.2 Identify and describe relationships among inscribed angles, radii.</p> <p>G.C.B.5 Derive the formula for the area of a sector.</p>	<p>Find measures of central angles and arcs, circumference and arc length, and areas of circles.</p> <p>Work with sectors and segments of circles and should be able to find the areas of these sectors and segments.</p>	10.6-10.7
Week 11	<p>G.GMD.B.4 Identify the shapes of two-dimensional cross-sections of three dimensional objects.</p> <p>G.MG.A.1 Use geometric shapes, their measures, and their properties to describe objects.</p> <p>G.MG.A.1 Use geometric shapes, their measures, and their properties to describe objects.</p>	<p>Draw and use nets to visualize three-dimensional objects</p> <p>Find the surface areas of three-dimensional objects.</p> <p>Find surface areas and volumes of geometric figures, including prisms, cylinders, pyramids, cones, and spheres.</p>	11.1-11.6
Week 12	<p>G.GMD.A.1 Give an informal argument for the formulas for volume of a cylinder.</p> <p>G.GMD.A.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.</p>	<p>Find surface areas and volumes of geometric figures, including prisms, cylinders, pyramids, cones, and spheres.</p> <p>They will also apply this information to find surface areas and volumes of similar solids.</p>	11.4-11.7