Geometry
Objective Lists

> The checkboxes on the right side below may be used to help you record student progress. For example, you can record quarterly grades, or you can indicate level of skill development (not yet begun, beginning, developing, mastered).

Lesson	Number	Objective	✔	✔	✔	✔
1	GE.1.a	Describe a point, line, ray, line segment, and plane				
1	GE.1.b	Identify points, lines, rays, segments, and planes				
1	GE.1.c	Identify symbols associated with points, lines, rays, segments, and planes				
1	GE.1.d	Define the terms *equal, similar, congruent, collinear,* and *congruent*				
1	GE.1.e.1	Draw and label a line segment				
1	GE.1.e.2	Draw and label a ray				
1	GE.1.e.3	Draw and label a line				
1	GE.1.e.4	Draw and label a plane				
2	GE.2.a	Define the terms *coplanar, plane geometry,* and *solid geometry*				
2	GE.2.b	Define a *set, intersection, union, empty or null set, proper subset, improper subset, element, complement, n(A),* and *universal set*				
2	GE.2.c	Identify the symbols for set, intersection, union, empty or null set, proper subset, improper subset, element, not an element, complement, n(A), and universal set				
3	GE.3.a	Define *angle, protractor, degree,* and *vertex*				
3	GE.3.b	Measure given angles with a protractor				
3	GE.3.c	Draw angles of a given measure				
3	GE.3.d	Identify angles using Greek letters, 3-letter names, and 1-letter names				
3	GE.3.e	Differentiate between $\angle$ and m$\angle$				
4	GE.4.a	Classify angles as acute, right, obtuse, straight, or reflex				
4	GE.4.b	Identify and explain the meaning of the right angle indicator				

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5	GE.5.a	Define the terms *parallel, perpendicular, bisector, midpoint,* and *bisect*				
5	GE.5.b	Identify the symbols for parallel and perpendicular				
5	GE.5.c	Construct the perpendicular bisector of a line segment				
5	GE.5.d	Construct the bisector of an angle				
6	GE.6.a	Identify and write the Greek letters alpha, beta, gamma, and delta				
6	GE.6.b	Describe and identify adjacent angles, vertical angles, supplementary angles, and complementary angles				
7	GE.7.a	Describe transversal, interior angles, exterior angles, corresponding angles, alternate angles, alternate exterior angles, and alternate interior angles				
7	GE.7.b	Identify congruent pairs of angles formed by a set of parallel lines and a transversal				
7	GE.7.c	Describe the terms *postulate* and *converse*				
8	GE.8.a	Describe perimeter, quadrilateral, rectangle, parallelogram, rhombus, trapezoid, square, and interior angle				
8	GE.8.b	State the number of degrees in the interior angles of a triangle and a quadrilateral				
9	GE.9.a	Define the terms area, height, and base				
9	GE.9.b	Find the area of a rectangle, parallelogram, triangle, square, and trapezoid				
10	GE.10.a	Define the terms *equilateral, equiangular, isosceles,* and *scalene*				
10	GE.10.b	Define the terms *obtuse, right,* and *acute* as they relate to triangles				
10	GE.10.c	Explain why the sum of the lengths of the shorter two sides of a triangle must be greater than the length of the longest side of the triangle				
10	GE.10.d	Demonstrate the use of hash marks to show congruent line segments or congruent angles				
11	GE.11.a	Define the terms *polygon, concave polygon, convex polygon, regular polygon, pentagon, hexagon, octagon, decagon, dodecagon, interior angle,* and *exterior angle*				
11	GE.11.b	Calculate the sum of the measures of the interior angles of a polygon				
11	GE.11.c	State the measure of one interior angle of a regular polygon				
11	GE.11.d	State that the sum of the measures of the exterior angles of a polygon is 360°				
12	GE.12.a	Define the terms *circle, center, chord, radius, diameter, tangent, secant, sector, arc, sphere, ellipse, central angle, minor arc, major arc, intercepted arc,* and *inscribed angle*				
12	GE.12.b	State the relationship between the measures of a central and an inscribed angle in a circle				

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13	GE.13.a	State the formula for the area of a circle				
13	GE.13.b	Find the area of a circle				
14	GE.14.a	Define the terms *face*, *edge*, and *vertex* as they relate to solid shapes				
14	GE.14.b	Define the terms *cube* and *cylinder*				
14	GE.14.c	Find the volume of a rectangular solid				
14	GE.14.d	Find the volume of a cylinder				
15	GE.15.a	Define the terms *altitude* and *slant height*				
15	GE.15.b	Define the terms *pyramid, cone, triangular prism,* and *sphere*				
15	GE.15.c	Find the volume of a pyramid				
15	GE.15.d	Find the volume of a cone				
15	GE.15.e	Find the volume of a triangular prism				
15	GE.15.f	Find the volume of a sphere				
16	GE.16.a	Find the surface area of any rectangular solid				
16	GE.16.b	Find the surface area of a pyramid				
16	GE.16.c	Describe the net that would be made from a given solid, such as a cylinder				
16	GE.16.d	Find the surface area of a cylinder				
17	GE.17.a	Define the term *radical*				
17	GE.17.b	Perform addition and subtraction operations with terms containing radicals				
17	GE.17.c	Perform multiplication and division operations with terms containing radicals				
17	GE.17.d	Simplify radical expressions by removing all square factors from under the radical sign				
17	GE.17.e	Find decimal approximations of irrational roots using a calculator				
18	GE.18.a	Define the terms *leg* and *hypotenuse* in reference to a right triangle.				
18	GE.18.b	State the Pythagorean theorem				

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18	*GE.18.c*	Use the Pythagorean theorem to find the missing side of a right triangle when two sides are given				
18	*GE.18.d*	State the converse of the Pythagorean theorem				
18	*GE.18.e*	Determine if a triangle is right when given the lengths of the three sides				
19	*GE.19.a*	Rationalize the denominator of a fraction (one-term denominator)				
20	*GE.20.a*	State the proportional relationship between one leg and the hypotenuse on a 45-45-90 triangle				
20	*GE.20.b*	State the proportional relationship between one leg of a 45-45-90 triangle and the other leg				
20	*GE.20.c*	State the lengths of the remaining sides of a 45-45-90 triangle when given the length of one side				
20	*GE.20.d*	Determine whether a triangle has angle measures of 45-45-90 based on the side lengths				
21	*GE.21.a*	State the proportional relationships among the three sides of a 30-60-90 triangle				
21	*GE.21.b*	Find the length of any side of a 30-60-90 triangle given any other side				
21	*GE.21.c*	Determine whether a triangle has angle measures of 30-60-90 based on the side lengths				
22	*GE.22.a*	State the Property of Symmetry: if A = B, then B = A				
22	*GE.22.b*	State the Reflexive Property: A = A				
22	*GE.22.c*	State the Transitive Property: if A = B and B = C, then A = C				
22	*GE.22.d*	Define the terms *axiom*, *postulate*, and *theorem*				
23	*GE.23.a*	Identify corresponding parts of a pair of congruent or similar triangles				
23	*GE.23.b*	Define the term remote interior angle				
24	*GE.24.a*	Prove a pair of triangles congruent using SSS				
24	*GE.24.b*	Prove a pair of triangles congruent using SAS				
25	*GE.25.a*	Prove a pair of triangles congruent using ASA				
25	*GE.25.b*	Prove a pair of triangles congruent using AAS				
25	*GE.25.c*	Describe CPCTC				
25	*GE.25.d*	Identify corresponding parts of congruent triangles				

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25	GE.25.e	State the Amplified Parallelogram Theorem (APT)				
25	GE.25.f	Apply the Amplified Parallelogram Theorem (APT)				
26	GE.26.a	Prove two right triangles congruent by HL				
26	GE.26.b	Prove two right triangles congruent by HA				
26	GE.26.c	Prove two right triangles congruent by LA				
27	GE.27.a	Define the term *similar*				
27	GE.27.b	Define the AA postulate				
27	GE.27.c	Prove two triangles similar using the AA postulate				
27	GE.27.d	State the ratio of corresponding sides in pairs of similar polygons				
27	GE.27.e	Find the lengths of missing sides in pairs of similar polygons when the ratio of corresponding sides is known				
28	GE.28.a	Translate a graph horizontally and/or vertically using integer movements				
28	GE.28.b	Reflect a graph across the x or y axis				
28	GE.28.c	Reflect a graph across horizontal and vertical lines that are not axes				
28	GE.28.d	Rotate a graph about the origin				
28	GE.28.e	Rotate a graph about a point other than the origin				
28	GE.28.f	Dilate a graph about its center				
28	GE.28.g	Combine two or more transformations of one graph				
28	GE.28.h	Describe transformations given "before and after" graphs				
29	GE.29.a	Define the terms adjacent and opposite				
29	GE.29.b	Define the trigonometric ratios *sine*, *cosine*, and *tangent*				
29	GE.29.c	Give sine, cosine, and tangents of angles in triangles with given side lengths				
30	GE.30.a	Define the trigonometric ratios *secant*, *cosecant*, and *cotangent*				
30	GE.30.b	State the secant, cosecant, and tangent in triangles with given side lengths				
30	GE.30.c	State the Pythagorean identity				