

Grade PK	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>	<p>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</p>
A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Plane Geometric Figures	A. Properties of Plane Geometric Figures
1. Recognize and use the attributes of plane geometric figures	1. Recognize and describe the attributes of plane geometric figures	1. Recognize and apply the properties/attributes of plane geometric figures	1. Recognize and apply the properties/attributes of plane geometric figures	1. Analyze the properties of plane geometric figures	1. Analyze the properties of plane geometric figures	1. Analyze the properties of plane geometric figures	1. Analyze the properties of plane geometric figures	1. Analyze the properties of plane geometric figures	1. Analyze the properties of plane geometric figures
<p>a. Sort objects by one attribute such as: shape, color, and size</p> <p>1. The Shape of Things</p>	<p>a. Sort and regroup everyday objects and geometric figures according to attributes such as: shape, color, size</p>	<p>a. Identify, name, and compare triangles, circles, squares, rectangles, and rhombi by their attributes</p> <p>1. The Shape of Things</p>	<p>a. Identify and describe sides and corners</p>	<p>a. Identify or describe points, lines, line segments, rays, and angles</p>	<p>a. Identify properties of angles using manipulatives and pictures</p>	<p>a. Identify and describe relationships of lines and line segments in geometric figures or pictures</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use parallel or perpendicular lines and line segments 	<p>a. Identify, describe, and label points, lines, rays, line segments, vertices, angles, and planes using correct symbolic notation</p>	<p>a. Identify and describe angles formed by intersecting lines, line segments, and rays</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use vertical, adjacent, complementary, or supplementary angles (Include the angle symbol) 	<p>a. Identify and describe geometric relationships between angles formed when parallel lines are cut by a transversal.</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use alternate interior, alternate exterior, or corresponding angles

<p>b. Name the attributes of plane figures such as: shape, color, size</p>	<p>b. Describe plane figures and their attributes such as: shape, color, size</p> <p>1. The Shape of Things</p>	<p>b. Create models of triangles, circles, squares, and rectangles with varied materials</p>	<p>b. Identify and describe quadrilaterals such as: squares, rectangles, rhombi</p>	<p>b. Identify or describe polygons</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use triangles, quadrilaterals, pentagons, hexagons, or octagons and the number of sides or vertices 	<p>b. Identify, compare, classify, and describe angles in relationship to another angle</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use acute, right, or obtuse angles 	<p>b. Identify polygons within a composite figure</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use polygons with no more than 8 sides as part of a composite figure comprised of triangles or quadrilaterals 	<p>b. Identify and describe line segments</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use diagonal line segments 	<p>b. Identify angles formed when two parallel lines are cut by a transversal</p>	<p>b. Identify and describe the relationship among the parts of a right triangle</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use the hypotenuse or the legs of right triangles
<p>c. Match triangles, circles, and squares</p>	<p>c. Identify triangles, circles, squares, and rectangles</p> <p>1. The Shape of Things</p>	<p>c. Combine and subdivide squares and triangles</p>	<p>c. Identify and describe polygons by the number of sides such as: triangles, squares, rectangles, hexagons, octagons</p>	<p>c. Identify or describe quadrilaterals</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use squares, rectangles, rhombi, parallelograms, and trapezoids and the length of sides 	<p>c. Identify parallel and intersecting line segments</p>	<p>c. Identify and describe the radius and diameter of a circle</p> <p>77. Trees in Trouble, Part B 80. Nothing Succeeds Like Succession, Part B</p>	<p>c. Identify and describe the parts of a circle</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use radius, diameter, or circumference 	<p>c. Identify the parts of right triangles</p>	
<p>d. Identify triangles, circles, and squares in the environment</p> <p>1. The Shape of Things</p>	<p>d. Compare, trace, and reproduce triangles, circles, squares, and rectangles</p>		<p>d. Combine and subdivide squares, triangles, and rectangles to identify a new shape</p>	<p>d. Identify triangles, rectangles, or squares as part of a composite figure</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use a combination of 2 of the stated 					

				polygons					
				2. Analyze geometric relationships		2. Analyze geometric relationships	2. Analyze geometric relationships	2. Analyze geometric relationships	2. Analyze geometric relationships
				a. Identify right angles		a. Compare and classify quadrilaterals by length of sides and types of angles (Include the angle symbol \angle ABC) Assessment limit: <ul style="list-style-type: none"> Use squares, rectangles, rhombi, parallelograms, and trapezoids 	a. Compare and classify triangles by sides Assessment limit: <ul style="list-style-type: none"> Use scalene, equilateral, or isosceles 	a. Determine a missing angle measurement using the sum of the interior angles of polygons. Assessment limit: <ul style="list-style-type: none"> Use angle measures in a quadrilateral 	a. Determine the measurements of angles formed by parallel lines cut by a transversal Assessment limit: <ul style="list-style-type: none"> Use alternate interior, alternate exterior, and corresponding angles
						b. Compare triangles by sides	b. Compare and classify triangles by angle measure Assessment limit: <ul style="list-style-type: none"> Use equiangular, obtuse, acute, or right 	b. Determine the measure of angles formed by intersecting lines, line segments, and rays. Assessment limit: <ul style="list-style-type: none"> Use vertical, adjacent, complementary, or supplementary angles 	b. Apply right angle concepts to solve real-world problems Assessment limit: <ul style="list-style-type: none"> Use the Pythagorean Theorem
							c. Determine a third angle measure of a triangle given two angle measures Assessment limit: <ul style="list-style-type: none"> Use the concept of the sum of angles in any 	c. Describe the relationship between the legs and hypotenuse of right triangles	c. Determine whether three given side lengths form a right triangle

							triangle is 180° without using a diagram		
							<p>d. Identify and compare the relationship between parts of a circle</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use radius, diameter and circumference ($\pi=3.14$) 		
B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures	B. Solid Geometric Figures
1. Recognize and use the attributes of solid geometric figures	1. Recognize, describe, and use the attributes of solid geometric figures	1. Recognize and use the attributes of solid geometric figures	1. Analyze the properties of solid geometric figures	1. Analyze the properties of solid geometric figures	1. Analyze the properties of solid geometric figures	1. Analyze the properties of solid geometric figures			
a. Sort objects by one attribute such as: size, shape, weight, length	a. Match, sort, and regroup objects according to attributes	a. Identify and compare cubes, spheres, cylinders, pyramids, cones, and rectangular prisms	a. Compare two- and three-dimensional shapes such as: square to a cube, square and rectangle to a rectangular prism.	<p>a. Identify and describe cubes, rectangular prisms, and triangular prisms</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use cubes and the number of edges, faces, vertices, or shape of each face 	<p>a. Identify cones, cylinders, prisms, and pyramids</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use cones or cylinders 	<p>a. Identify and classify pyramids and prisms by the number of edges, faces, or vertices</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use triangular pyramids, rectangular pyramids, triangular prisms, or rectangular prisms 			
b. Find solid figures in the environment	b. Describe solid figures				b. Describe solid geometric figures by the number of edges,	b. Identify and classify pyramids and prisms by the base			

					<p>faces, or vertices</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Use triangular pyramids, rectangular pyramids, triangular prisms, or rectangular prisms 	<p>Assessment limit:</p> <ul style="list-style-type: none"> Use triangular prisms and pyramids or rectangular prisms and pyramids 			
	c. Identify solid geometric figures in the environment								
					<p>2. Analyze the relationship between plane geometric figures and surfaces of solid geometric figures</p>	<p>2. Analyze the relationship between plane geometric figures and faces of solid geometric figures</p>			
					<p>a. Compare a plane figure to surfaces of solid geometric figure</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Analyze or identify the number or arrangement of squares needed to make a cube and triangles/rectangles needed to make a triangular pyramid or rectangular pyramid. 	<p>a. Compare a plane figure to faces of solid geometric figure</p> <p>Assessment limit:</p> <ul style="list-style-type: none"> Analyze and identify the number or arrangement of rectangles needed to make a rectangular prism, number of triangles/rectangles needed to make a triangular prism, and the number of circles/rectangles needed to make a 			

						cylinder.			
C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures	C. Representation of Geometric Figures
		1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures	1. Represent plane geometric figures
		a. Sketch triangles, circles, squares, rectangles, and rhombi	a. Sketch plane figures	a. Sketch triangles, quadrilaterals, pentagons, hexagons, octagons, and circles	a. Sketch acute, right, obtuse angles, and parallel and intersecting line segments	a. Identify, describe, and draw angles, parallel line segments, and perpendicular line segments Assessment limit: <ul style="list-style-type: none">Provide their dimensions as whole numbers (0 - 20) or angle measurements (0° - 179°)	a. Draw geometric figures using a variety of tools Assessment limit: <ul style="list-style-type: none">Draw triangles given the measures of 2 sides and one angle or 2 angles and 1 side using whole numbers (0- 20) and angle measures (0°-179°)	a. Construct geometric figures using a variety of construction tools Assessment limit: <ul style="list-style-type: none">Construct a circle using a given line segment as the radius in whole number inches or centimeters	a. Draw quadrilaterals Assessment limit: <ul style="list-style-type: none">Provide given whole number dimensions in inches or centimeters or angle measuremen ts
							b. Identify, describe, or draw a polygon Assessment limit: <ul style="list-style-type: none">Use the first quadrant given no more than six coordinates	b. Construct geometric figures using a variety of construction tools. Assessment limit: <ul style="list-style-type: none">Construct a line segment congruent to a given line segment	b. Construct perpendicular line segments Assessment limit: <ul style="list-style-type: none">Provide a given point on a given line segment
							c. Identify or describe angle relationships Assessment	c. Construct geometric figures using a variety of construction tools	c. Construct triangles Assessment limit:

							limit: <ul style="list-style-type: none"> Use perpendicular bisectors or angle bisectors 	Assessment limit: <ul style="list-style-type: none"> Construct a perpendicular bisector to a given line segment or a bisector of a given angle 	<ul style="list-style-type: none"> Construct a triangle congruent to a given triangle
D. Congruence	D. Congruence	D. Congruence	D. Congruence	D. Congruence	D. Congruence	D. Congruence and Similarity	D. Congruence and Similarity	D. Congruence and Similarity	D. Congruence and Similarity
	1. Recognize congruent objects	1. Identify congruent figures	1. Compare congruent figures	1. Analyze congruent figures	1. Analyze geometric figures	1. Analyze similar figures to	1. Analyze congruent figures	1. Apply the properties of congruent polygons	1. Apply the properties of similar polygons
	a. Identify everyday objects which have the same size and shape 1. The Shape of Things	a. Match congruent figures	a. Describe congruent figures as having the same size and shape	a. Identify and describe geometric figures as congruent Assessment limit: <ul style="list-style-type: none"> Use the same shape and same size 	a. Identify and describe geometric figures as congruent Assessment limit: <ul style="list-style-type: none"> Identify the result in a transformation as being congruent to the original figure 	a. Identify or describe geometric figures as similar Assessment limit: <ul style="list-style-type: none"> Use same shape and different size 	a. Identify and describe congruent polygons and their corresponding parts	a. Determine the congruent parts of polygons Assessment limit: <ul style="list-style-type: none"> Use the length of corresponding sides or the measure of corresponding angles and whole numbers (0 – 1000) 	a. Determine similar parts of polygons Assessment limit: <ul style="list-style-type: none"> Use the length of corresponding sides or the measure of corresponding angles and rational numbers with no more than 2 decimal places (0 – 1000)
								b. Identify and describe similar polygons and their corresponding parts	
E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations	E. Transformations
1. Begin to recognize a	1. Begin to recognize a	1. Recognize a transformation	1. Recognize a transformation	1. Analyze a transformation	1. Analyze a transformation	1. Analyze a transformation	1. Analyze a transformation on a	1. Analyze a transformation on a	1. Analyze a transformation on a

transformation	transformation						coordinate plane	coordinate plane	coordinate plane
a. Tell position by using words such as: over, under, above, on, next to, below, beside, behind	a. Use position words such as: over, under, above, on, next to, below, beside, behind	a. Use the direction, location, and position words right and left	a. Apply visualization and spatial reasoning in activities such as: tangrams	a. Identify and describe the results of a slide, flip, and turn Assessment limit: <ul style="list-style-type: none">Use horizontal slide, flip over a vertical line, or turn of 90° clockwise around a given point of a geometric figure or picture	a. Identify and describe the results of translations, reflections, and rotations Assessment limit: <ul style="list-style-type: none">Use a horizontal line translation, reflection over a vertical line, or rotation of 90° clockwise around a given point of a geometric figure or picture	a. Identify and describe the results of translations, reflections, and rotations of geometric figures Assessment limit: <ul style="list-style-type: none">Use translation along a vertical line, reflection over a horizontal line, or rotation 90° or 180° around a given point	a. Plot the result of one transformation (translation, reflection, rotation) on a coordinate plane	a. Identify, describe, and plot the results of one transformation on a coordinate plane Assessment limit: <ul style="list-style-type: none">Identify or plot the result of one translation (horizontal or vertical), reflection (horizontal or vertical), or rotation about a given point (90° or 180°)	a. Identify, describe, and plot the results of multiple transformations on a coordinate plane Assessment limit: <ul style="list-style-type: none">Identify or plot the result of two transformations on one figure using translations (horizontal or vertical), reflections (horizontal or vertical), or rotations about a given point (90° or 180°)
b. Recognize a slide using concrete materials	b. Use spatial reasoning to solve simple puzzles	b. Apply spatial reasoning in activities such as: pattern block	b. Identify and demonstrate slides, flips, and turns					b. Identify and describe transformations that result in rotational and reflectional symmetry	
	c. Demonstrate slides using simple objects	c. Identify and demonstrate slides and flips using manipulatives							
	2. Analyze geometric figures and pictures	2. Analyze geometric figures and pictures	2. Analyze geometric figures and pictures	2. Analyze geometric figures or pictures					
	a. Recognize the concept of symmetry using pictures	a. Demonstrate symmetry in basic shapes and pictures by paper folding and	a. Recognize that basic shapes have several lines of symmetry	a. Identify and describe symmetry Assessment limit:					

		drawing a line of symmetry		<ul style="list-style-type: none">Use no more than 4 lines of symmetry					
			b. Demonstrate symmetry in basic shapes and pictures by drawing 2 lines of symmetry						

Note: Highlighted assessment limits will be tested in the no calculator section of MSA. In the assessment limit, (0-10) or (-10 to 10) means all numbers in the problem or the answer will fall within the range of 0 to 10 (including endpoints) or -10 to 10 (including endpoints), respectively. All content standards are tested in MSA but not all objectives. Objectives that have an assessment limit are tested on MSA. Objectives without an assessment limit are not tested on MSA.

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