



IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME

GEOMETRY

“I Can” Help My Student

- I can draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
- I can identify and classify angles and identify them in two-dimensional figures.
- I can distinguish between parallel and perpendicular lines and use them in geometric figures.
- I can identify differences and similarities among two dimensional figures based on the absence or presence of characteristics such as parallel or perpendicular lines and angles of a specified size.
- I can sort objects based on parallelism, perpendicularity, and angle types.
- I can recognize a right triangle as a category for classification.
- I can identify lines of symmetry and classify line-symmetric figures.
- I can draw lines of symmetry.



KEY WORDS TO KNOW

parallelogram: a quadrilateral with opposite sides that are parallel and of equal length and opposite angles that are equal.

parallel lines: lines that are the same distance apart.

perpendicular lines: lines that intersect at right angles to each other.

polygon: a plane shape having three or more sides.

quadrilateral: polygons with (4) sides.

rectangle: a quadrilateral with four right angles and two pairs opposite equal parallel sides.



What should my student already know before beginning this unit?

- ✓ Distinguish between defining and non-defining attributes of a shape (Grade 1)
- ✓ Identify triangles, quadrilaterals, pentagons, hexagons, and cubes and their specific attributes (Grade 2)



Recommended Children’s Literature

The use of children’s literature is important. Use these books to enhance both language literacy and mathematical literacy for an interdisciplinary connection during story time. These books can be checked out at your local Atlanta-Fulton Public Library System

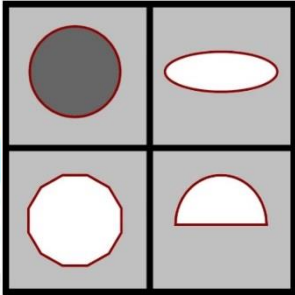
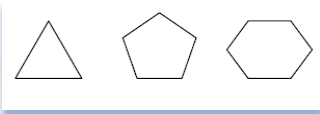

- ♥ *The Greedy Triangle* by Marilyn Burns
- ♥ *What Is Symmetry?* By Edward Emberley

- ♥ *The Patchword Quilt* by Valerie Flourney
- ♥ *Grandfather Tang’s Stories* by Ann Tompert

MATH PARENT GUIDE – UNIT 6



GEOMETRY

Important Concepts Addressed in this Unit	Sample Problems	How You Can Help Your Student
<ul style="list-style-type: none"> Geometric figures can be analyzed based on their properties. Geometric figures can be classified based on their properties. Parallel sides, particular angle measures, and symmetry can be used to classify geometric figures. Two lines are parallel if they never intersect and are always equidistant. Two lines are perpendicular if they intersect in right angles (90°). Lines of symmetry for a two-dimensional figure occur when a line can be drawn across the figure such that the figure can be folded along the line into matching parts. 	<p>Sample Problem 1:</p> <p>Tell students to take a look at the four figures in the square. Ask: Which doesn't belong? Give students think time. Then, ask the student to explain their reasoning.</p>  <p>Sample Problem 2: For each figure, draw <i>all</i> of the lines of symmetry. What pattern do you notice? How many lines of symmetry do you think there would be for regular polygons with 9 and 11 sides. Sketch each figure and check your predictions.</p>  <p>Solution: Polygons with an odd number of sides have lines of symmetry that go from a midpoint of a side through a vertex (corner)</p>	<p>Interactive Learning Games</p> <p>Geometry Concepts: https://learnzillion.com/lessonsets/757-draw-points-lines-line-segments-rays-angles-and-perpendicular-and-parallel-lines</p> <p>Parallel, Perpendicular and Intersecting Lines: http://www.ixl.com/math/grade-4/parallel-perpendicular-intersecting</p>  <p>Triangle Sort: http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html#triangles</p> <p>Rectangles and Parallelograms: http://illuminations.nctm.org/LessonDetail.aspx?ID=L350</p> <p>Finding Lines of Symmetry: http://illuminations.nctm.org/LessonDetail.aspx?ID=L556</p> <p>Symmetry Sort: http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html#quad</p>