



Grade 4 Unit 6

Geometry

Volume 1 Issue 6

References

Helpful Links:

<http://www.kidsmathgamesonline.com/geometry.html>
(Geometry Games for Kids)

<http://www.math-play.com/Geometry-Math-Games.html>
(Geometry Math Play)

http://www.mathplayground.com/index_geometry.html
(Geometry and Spatial Reasoning Activities)

Math Grade 4

Textbook Connection:

Ch. 14, Lessons 14.1-14.11

Textbook Online:

<http://connected.mcgraw-hill.com/connected/login.do>

Student User ID:
ccsd(student ID)
Password: cobbmath1

Dear Parents,

Your student's math class is calling for students to be actively engaged in doing math in order to learn math. In the classroom, students will frequently work on tasks and activities to discover and apply mathematical thinking. Students will be expected to explain or justify their answers and to write clearly and properly. Your student will receive a consumable My Math textbook and online access from his or her teacher.

Concepts Students will Use and Understand

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines
- Identify and classify angles and identify them in two-dimensional figures
- Distinguish between parallel and perpendicular lines and use them in geometric figures
- 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
- Sort objects based on parallelism, perpendicularity, and angle types
- Recognize a right triangle as a category for classification
- Identify lines of symmetry and classify line-symmetric figures
- Draw lines of symmetry

Vocabulary

angle: the amount of turn between two rays (or straight lines) that meet at a vertex

line of symmetry: the imaginary line where a shape can be folded so that both halves are the same

parallel lines: two lines in a plane that are equidistant and never meet

parallelogram: a quadrilateral that has opposite sides that are parallel

perpendicular lines: two lines in a plane that meet at a right angle

polygon: a closed, plane shape that has straight sides that do not cross

quadrilateral: a polygon with four sides

rectangle: a polygon with four right angles

rhombus: a polygon with four sides of equal length

right triangle: a triangle that has exactly one right angle

side: one of the lines that makes a polygon

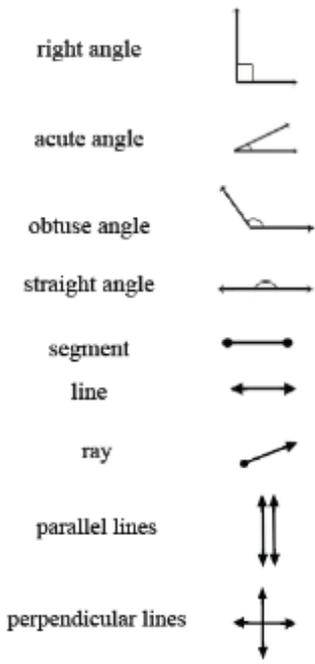
square: a polygon with four sides of equal length and four right angles

symmetry: a shape that has two sides or two halves that are the same size, shape, and position

trapezoid: a quadrilateral that contains at least one set of parallel lines

vertex: the point where two lines meet (a corner)

Symbols



Example 1

Draw two different types of quadrilaterals that have two pairs of parallel sides.



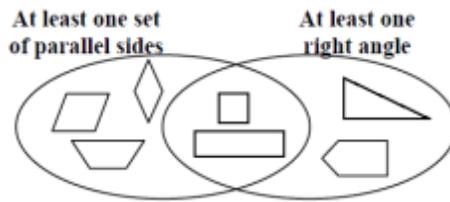
Example 2

How many acute, obtuse, and right angles are in this shape?



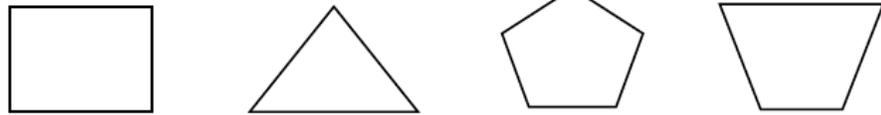
Example 3

Classify and sort shapes based on parallel lines, perpendicular lines, and angle types.



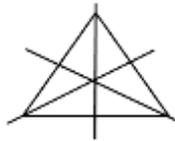
Example 4

Identify the shape that has perpendicular and parallel sides and justify your selection.



Example 5

Draw all the lines of symmetry for the equilateral triangle.



Activities to Complete at Home:

- Quiz your child with shape riddles! For example, provide your child with the following riddle: I am a quadrilateral; I have two pairs of parallel sides; I have two pairs of perpendicular sides; my sides are equal in length; I have four right angles. What shape am I? (square)
- Look for shapes around your home and at the market. Does the shape have any parallel or perpendicular lines? What type of angles does it have? Is it symmetrical?
- Give your child some shape cut-outs (such as circles, triangles, parallelograms, squares, etc.). Allow your child to fold the paper shapes and investigate the number of lines of symmetry within each shape.
- Have your child draw various regular and irregular shapes and identify the types of angles in each shape. Are there any parallel or perpendicular lines? Justify your answer.