



Dear Parents,

Over the next few weeks, we will be learning about **geometry** in math! The information below will help you to support your child as they learn these exciting, yet important fourth grade math skills.

The GOAL:

By the end of the unit, your child should be able to *analyze, classify and describe the characteristics of geometric shapes.*

Characteristics of Shapes

Classify shapes by lines (sides):

Shapes <u>with</u> parallel lines	Shapes <u>without</u> parallel lines

Help your child describe quadrilaterals:

A quadrilateral is a polygon with 4 sides and 4 angles.

Quadrilateral	Not a Quadrilateral

Describe Sides of Polygons:

	There are two sets of parallel lines . 1 set of solid lines and 1 set of dashed lines.
	The solid lines are perpendicular because they meet and form a right angle.

Group shapes by their angles

	This shape has 4 angles that are 90° . These are called right angles .
	This shape has 3 angles that are less than 90° . These angles are acute angles .
	This shape has angles that are greater than 90° . These angles are called obtuse angles .

Classify shapes by sides (lines):

Shapes <u>with</u> Perpendicular lines	Shapes <u>without</u> Perpendicular lines

Types of Triangles

	Equilateral Triangle
	Isosceles Triangle
	Scalene Triangle
	Right Triangle

Central Dauphin School District
Grade 4 Math: Unit 2 Parent Letter
Geometry



Grade 4 Math: PA Core Math Standards in Unit 2

CC.2.3.4.A.1: Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

CC.2.3.4.A.2: Classify two-dimensional figures by properties of their lines and angles.

C.C.2.3.4.A.3: Recognize symmetric shapes and draw lines of symmetry.

C.C.2.3.4.A.6: Measure angles and use properties of adjacent angles to solve problems.

-- HOW YOU CAN HELP AT HOME --

- Provide opportunities to identify and/or classify shapes using everyday items
- Use crayons, markers, sidewalk chalk to draw and group shapes
- Use string, Play-doh, spaghetti, pipe cleaners, Popsicle sticks, straws, etc., to make shapes
- Talk about the parts of a shape (how many sides, angles, perpendicular)

-- KEY MATH VOCABULARY --

Adjacent Angle: Two angles with a common side and a common vertex, but no overlap.

Defining Attribute: A characteristic or quality that defines a shape (e.g., 4 equal sides is a defining attribute of a square.)

Degree: A unit of measure for the inclination of an angle. It is represented by the symbol $^{\circ}$ and is used with a number, example: 90° .

Leg: The two sides of a triangle that meet to form a right angle **OR** the two congruent sides of an isosceles triangle.

Partition (divide): Break into equal parts.

Plane: A flat surface that extends in all directions without ending.

Polygon: A closed shape with straight sides.

Quadrilateral: A quadrilateral is a polygon with 4 sides and 4 angles.

Symmetry: When a shape or figure can be divided into two congruent parts that are mirror images.

Vertex: A point where lines, rays, line segments, two sides of a two-dimensional, or three sides of a three-dimensional figure meet.

