

FAMILY MATH

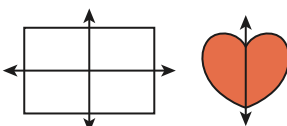
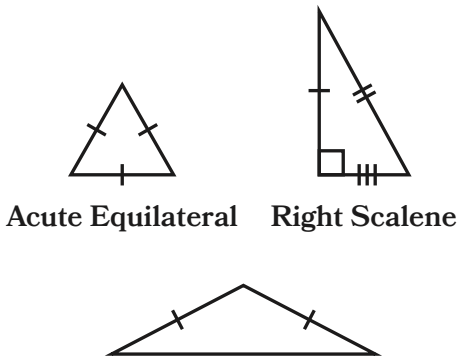
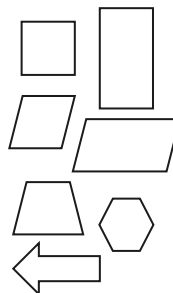
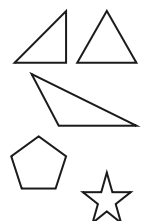
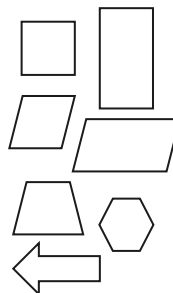
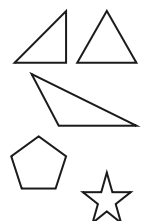
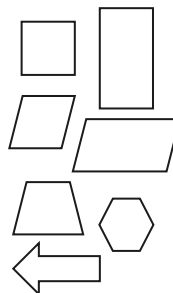
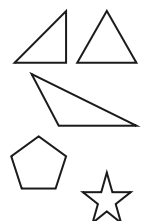
Two-Dimensional Figures and Symmetry

Dear Family,

Your student is investigating lines of symmetry and classifying polygons. They fold paper and draw lines to identify symmetry in shapes and real-world images. They use what they know about angle measures to classify triangles as acute, obtuse, or right. They use side lengths to classify triangles as equilateral, isosceles, or scalene. Students continue to practice sorting and classifying shapes based on their attributes.

Key Terms

acute triangle	obtuse triangle
equilateral triangle	right triangle
isosceles triangle	scalene triangle
line of symmetry	

Lines of Symmetry 	 Acute Equilateral Right Scalene Obtuse Isosceles	<table><tr><th>Follows Rule</th><th>Does Not Follow Rule</th></tr><tr><td></td><td></td></tr></table>	Follows Rule	Does Not Follow Rule		
Follows Rule	Does Not Follow Rule					
						
Students learn that a line that separates a figure into two matching parts is called a line of symmetry.	Students can use the markings on a triangle to classify it. When the sides of a figure have the same markings, that shows the sides are equal in length. An equilateral triangle has all sides equal in length. An isosceles triangle has exactly two sides equal in length. A scalene triangle has no sides equal in length.	Students classify polygons based on a rule, or attribute. The shapes in this table are sorted based on whether they have a pair of parallel sides.				

At-Home Activities

ABC Symmetry

Help your student use the letters of the alphabet to practice finding lines of symmetry. Have them write their name neatly with capital letters and ask them to mark any lines of symmetry they see on each letter. Discuss whether any letters have more than one line of symmetry or no line of symmetry. Repeat with the names of other family members or friends. See whether they can find names or words where all the letters have vertical lines of symmetry or all the letters have horizontal lines of symmetry. Challenge them to find all the letters in the alphabet that have no lines of symmetry.

Build Triangles

Use toothpicks, dry spaghetti, sticks, or any similar object to construct triangles with your student. Discuss the attributes of each triangle you construct. Following are example questions to help you guide the discussion,

- “Look at the angles. Are the angles right angles? Are all the angles acute angles? Or is there an obtuse angle?”
- “Look at the sides. Are the sides all the same length? Are the sides all different lengths? Or are only two sides the same length?”

Use these attributes to classify the triangle as right, acute, or obtuse and as equilateral, scalene, or isosceles. Encourage your student to find as many combinations as they can. Keep in mind that some combinations, such as right equilateral, are not possible.