

KEY CONCEPT OVERVIEW

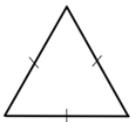
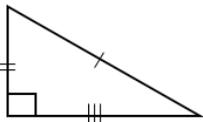
In Lessons 12 through 16, students explore **lines of symmetry** and characteristics of triangles and **quadrilaterals**.

You can expect to see homework that asks your child to do the following:

- Find and draw lines of symmetry.
- Given half of a figure and the line of symmetry, draw the other half of the figure.
- Classify triangles by side lengths (e.g., **equilateral**, **isosceles**, **scalene**) and by angle measurements (e.g., **acute**, **right**, **obtuse**).
- Draw triangles that fit different classifications (e.g., acute and scalene).
- Name quadrilaterals, identify attributes (i.e., characteristics) that define them, and construct them based on given attributes.

SAMPLE PROBLEM (From Lesson 13)

Classify each triangle by its side lengths and angle measurements. Circle the correct names.

	Classify Using Side Lengths	Classify Using Angle Measurements
a. 	Equilateral Isosceles Scalene	Acute Right Obtuse
b. 	Equilateral Isosceles Scalene	Acute Right Obtuse

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- Ask your child to look around the house for objects that have lines of symmetry. Examples include the headboard of a bed, dressers, chairs, couches, and place mats. Ask him to show where the line of symmetry would be and what makes it a line of symmetry. Be careful of objects such as doors and windows. They could have a line of symmetry, but if there's a knob or crank on just one side, then they are not symmetrical.
- Ask your child to name and draw all the quadrilaterals she can think of (e.g., **square, rectangle, parallelogram, trapezoid**, and **rhombus**). Alternatively, prompt her to draw a quadrilateral and then ask someone else to name it.

TERMS

Acute angle: An angle with a measure less than 90 degrees.

Equilateral triangle: A triangle with three sides of equal length.

Isosceles triangle: A triangle with at least two sides of equal length.

Line of symmetry: A line through a figure that creates two halves that match exactly.

Obtuse angle: An angle with a measure greater than 90 degrees but less than 180 degrees.

Parallelogram: A quadrilateral with two pairs of parallel sides. For example, squares, rectangles, and rhombuses are parallelograms.

Quadrilateral: Any polygon with four sides. For example, squares, rectangles, trapezoids, rhombuses, and parallelograms are all quadrilaterals.

Rectangle: A parallelogram with four 90 degree angles.

Rhombus: A parallelogram with all sides of equal length. A square is an example of a rhombus.

Right angle: An angle (formed by perpendicular lines) with a measure of 90 degrees.

Scalene triangle: A triangle with no sides of equal length and no angles of equal measure.

Square: A rectangle with all sides of equal length.

Trapezoid: A quadrilateral with at least one pair of parallel sides. Squares, rectangles, rhombuses, and parallelograms are examples of trapezoids as is any quadrilateral with one or two pairs of parallel sides.