

KEY CONCEPT OVERVIEW

In Lessons 4 through 9, students learn about the **attributes** of **two-dimensional figures**.

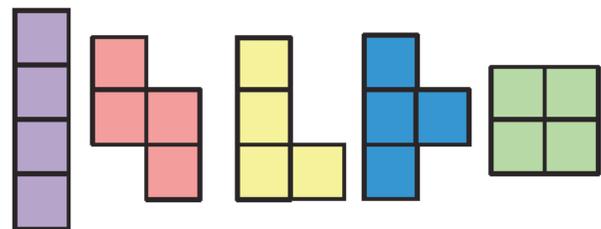
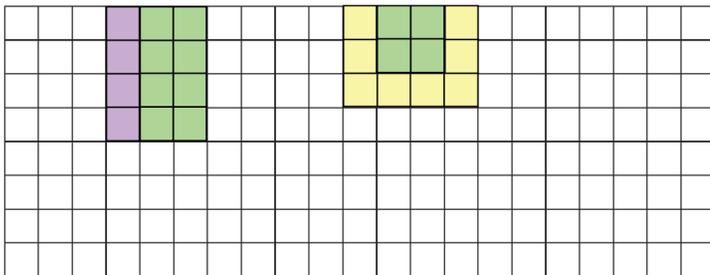
You can expect to see homework that asks your child to do the following:

- Given the attributes of **quadrilaterals** and other **polygons** (including **trapezoids**, **rhombuses**, **pentagons**, **hexagons**, and **regular polygons**), determine and draw each, and identify any parallel sides.
- **Compose** polygons by using **tetrominoes** (supplied to students).
- **Decompose** polygons by drawing lines to divide them into specified polygons.
- Compose polygons from **tangram** pieces (supplied to students).

SAMPLE PROBLEM (From Lesson 7)

Use tetrominoes to create at least two different rectangles, each with an area of 12 square units.

Next, color the grid below to show how you created the rectangles. You may use the same tetromino more than once.



Tetrominoes

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

- Go for a walk around your neighborhood or to a local park or playground, and ask your child to take pictures of different shapes. Try to find shapes that are composed from other shapes. Print out the pictures, or use software to design a slide show of the photos. Have your child add captions to describe the shapes by using the vocabulary she has been learning in school.

TERMS

Attributes: Characteristics of specific shapes. For example, a rectangle has the attributes of two sets of parallel sides and four 90 degree (right) angles.

Compose/Decompose: To make (compose) or break apart (decompose) a number, figure, or array.

Hexagon: A polygon with six sides. (See Figure 1.)

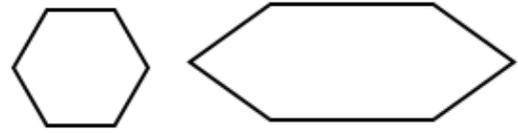


Figure 1

Pentagon: A polygon with five sides. (See Figure 2.)

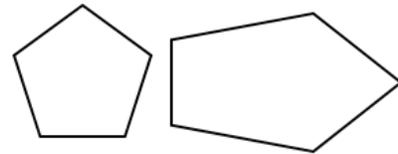


Figure 2

Polygon: A closed shape with three or more straight sides. For example, triangles, rectangles, pentagons, hexagons, and octagons are all polygons.

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

Regular polygon: A polygon with all sides equal in length and all angles equal in measure. (See Figure 3.)



Figure 3

Rhombus: A quadrilateral with all sides equal in length. (See Figure 4.)

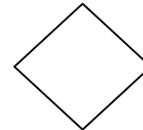


Figure 4

Trapezoid: A quadrilateral with at least one pair of parallel sides. (See Figure 5.)

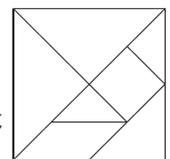


Figure 5

Two-dimensional figure: A flat figure with length and width. For example, squares, circles, triangles, and hexagons are two-dimensional figures, whereas cones, cubes, and prisms are three-dimensional figures.

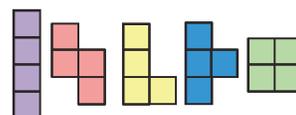
MODELS

Tangrams: A special set of puzzle pieces with five triangles and two quadrilaterals that compose a square.



Tangram

Tetrominoes: Shapes composed of four connected squares so every square shares at least one side with another square.



Tetrominoes