EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

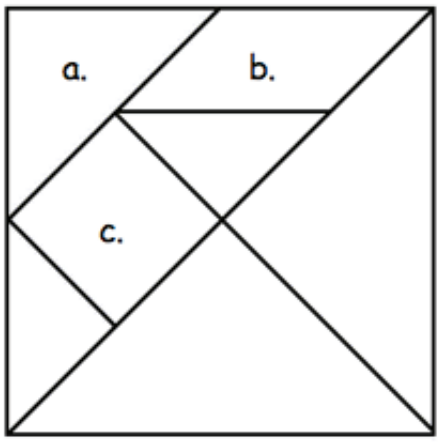
During the next few days, our math class will explore ways in which two-dimensional shapes can compose new shapes. For example, two triangles can form a square. We will study how smaller parts can create a larger whole. We will learn that larger shapes can be partitioned, or divided, into equal parts, or shares, and will focus on cases in which equal shares create **halves**, **thirds**, or **fourths**. We will use **pattern blocks** to build larger shapes out of smaller, equal parts. For example, a hexagon can be composed of two equal trapezoids; these two equal parts are called halves.

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

- Identify the polygons that compose a **tangram**.
- Use tangram pieces to make various polygons. For example, use the two smallest triangles to make one larger triangle.
- Tell how many equal shares are in a given shape and circle shapes divided into halves, thirds, and fourths.
- Name the pattern block used to cover one-half, one-third, or one-fourth of a given shape.

SAMPLE PROBLEM *(From Lesson 6)*

Identify each polygon labeled in the tangram as precisely as possible in the space below.



a. ***triangle***
b. ***parallelogram***
c. ***square***

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

- Invite your child to share with you the tangram created in class during Lesson 6. Encourage her to show you different shapes she can form by combining smaller tangram pieces, and ask her to describe and name the shapes. For example, she might say, "I used the two small triangles and the square to make a parallelogram! It has four straight sides and four angles, and each of the pairs of opposite sides is parallel." Challenge your child to reassemble the tangram into the large square. Help her store the cutout tangram pieces in a small plastic bag or envelope.
- Consider going to the library or bookstore to get *Grandfather Tang's Story*, by Ann Tompert. Read the book with your child, and invite him to use his tangram pieces to make the shapes shown in the book.
- Help your child make real-world connections with the math by asking questions such as, "Can you think of any objects that are made up of lots of smaller shapes?" (e.g., tile floors, brick walls, the sections of an orange) "When would you want to have equal shares of something?" (e.g., sharing food, such as a pizza) "Where do you see examples of halves, thirds, or fourths?" (e.g., a blanket or towel folded in half, a measuring cup filled to the $\frac{1}{3}$ mark with water, a newspaper folded into quarters, one cube in a stick of four linking cubes).

TERMS

Fourths: Four equal shares, or parts, that make a whole (e.g., fourths of a square).

Halves: Two equal shares, or parts, that make a whole (e.g., halves of a rectangle).

Thirds: Three equal shares, or parts, that make a whole (e.g., thirds of a circle).

MODELS

Pattern Blocks: Blocks shaped as hexagons, squares, triangles, trapezoids, and wide and thin rhombuses.

Tangram: A geometric puzzle consisting of a square cut into seven pieces that can be arranged to make various other shapes. (See Sample Problem.)