

## Chapter 10 Area of Polygons

### Dear Family,

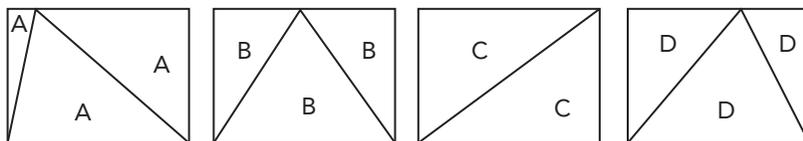
In this chapter, your student will learn how to find areas of different polygons. Some of the skills your student will practice are:

- finding areas of triangles, parallelograms, and trapezoids
- finding the area of a regular polygon by dividing it into smaller shapes
- solving problems involving areas of composite figures

### Activity

You can help your student understand the formula for the area of a triangle with the following activity.

- Cut a piece of paper into four rectangles of the same size and shape, or use four identical rectangular pieces of paper.
- With your student, choose one point on one side of each rectangle. Use a ruler to connect the point to the two corners of the opposite side of the rectangle. Label all the triangles from one piece of paper with the same letter and cut them out.



- Choose one set of triangles. Arrange the two smaller triangles to form one triangle that is the same size and shape as the larger triangle. Repeat with the other sets of triangles.
- Discuss with your student: In each case, what is the height of the largest triangle? What is its base? How is the area of the largest triangle related to the area of the original rectangle?

### Vocabulary to Practice

The **base** ( $b$ ) of a parallelogram or a triangle can be any of its sides.

The **height** ( $h$ ) of a triangle is the distance from the base to the vertex that is opposite it.

The **height** ( $h$ ) of a parallelogram or trapezoid is the distance between two parallel sides of the figure.

The formula for the **area of a triangle** is  $A = \frac{1}{2}bh$ .

The formula for the **area of a parallelogram** is  $A = bh$ .

The formula for the **area of a trapezoid** is  $A = \frac{1}{2}(b_1 + b_2)h$ .



### Online Resources

For additional Parent Resources [my.hrw.com](http://my.hrw.com)