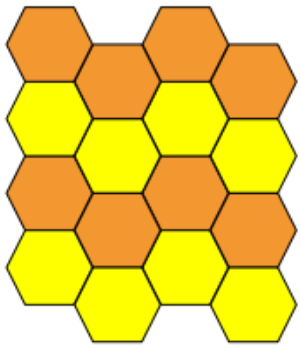
Eureka Math™ Tips for Parents

Grade 3
Module 7

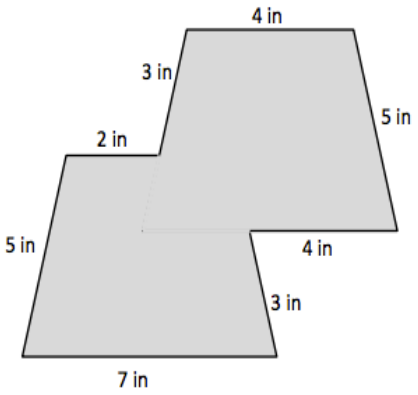
Geometry and Measurement Word Problems

In Module 7, students will get intensive practice with word problems, as well as hands-on investigation experiences with geometry and perimeter. Students will solve one- and two-step word problems, classify shapes based on their attributes, learn what a tessellation is, study perimeter and area, and end with a review of Grade 3 fundamental skills.



A simple tessellation of hexagons

Students are asked to find the perimeter of shapes in Module 7.



Students are also asked to classify shapes; for example, is this shape an octagon? Why or why not?

What Came Before this Module:

Students worked extensively with data, displaying both categorical and measurement data in bar graphs, line plots, and other types of graphs.

Key Terms and Ideas:

Attribute: any characteristic of a shape, including properties and other defining characteristics, e.g., straight sides, and non-defining characteristics, blue

Diagonal: e.g., the line drawn between opposite corners of a quadrilateral

Perimeter: boundary or length of the boundary of a two-dimensional shape

Property: e.g., having all sides equal in length

Regular polygon: polygon whose side lengths and interior angles are all equal

Tessellate: to tile a plane without gaps or overlaps

Tetrominoes: four squares arranged to form a shape so that every square shares at least one side with another square

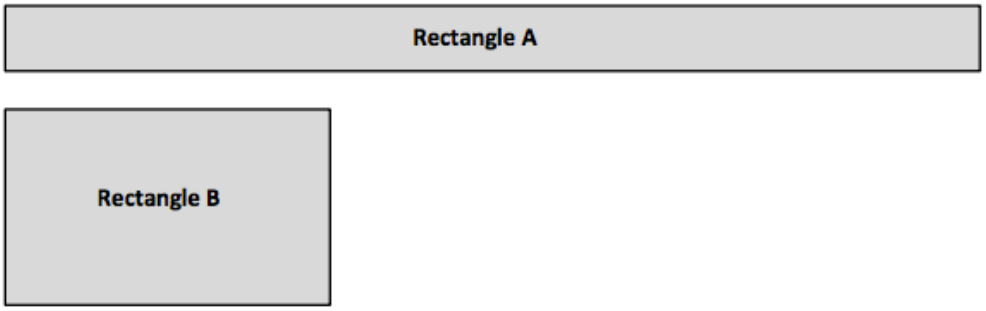
+ How You Can Help at Home:

- Ask your student about the attributes of basic shapes that you encounter (how many sides, are the angles equal, are the sides the same length, are they parallel, etc.).
- Play Tetris, a tetrominoe-based game!

Key Common Core Standards:

- *Solve problems involving the four operations, and identify and explain patterns in arithmetic.*
- *Represent and interpret data.*
- *Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.*
- *Reason with shapes and their attributes.*

Prepared by Erin Schweng, Math Coach



Both Rectangle A and Rectangle B are made of 15 square units. Students are asked to determine which one has the greatest perimeter, and why? They will explore what happens to perimeter as side lengths change in shapes with the same area.

Spotlight on Math Skills:

Calculating Perimeter and Area—foundational geometric skills

A Story of Units exposes students to several key skills that will be used throughout the elementary years.

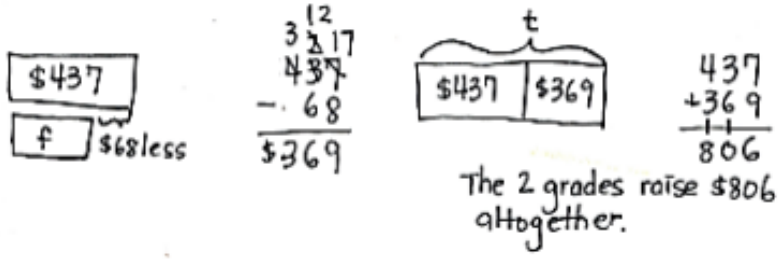
Students in Grade 3 work extensively for the first time in this module with the important geometric concepts of area. The foundations have been laid through earlier work with arrays, as well as the time spent defining and describing attributes of geometric shapes.

Now, students learn how to calculate the perimeter (the length of the boundary of a two-dimensional shape) of various figures, including rectangles and regular polygons. Students even explore a method to estimate the perimeter of a circle. They also work to understand the relationship between perimeter and area. The two rectangles above pose a typical question about the connection between perimeter and area.

Sample Problem from Module 7:

(Example taken from Module 7, Lesson 4)

The third-graders raised $437 in a fundraiser. The fourth-graders raised $68 less than the third-graders. How much money did the two grade levels raise altogether?



(Sample of a two-step word problem)