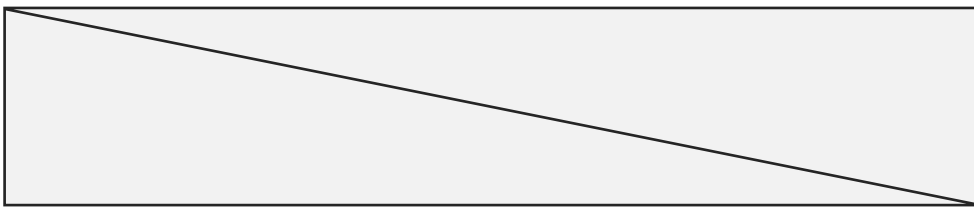


## Math Background

In *Math Expressions*, a Geometry and Measurement mini-unit follows each regular unit. This facilitates connections and enables review problems to extend throughout the year. In this unit, students use the multiplication and division skills they have learned in Unit 1 to find and understand areas of triangles and other shapes. In turn, they will use area models to visualize work with fractions and decimals later this year.

Measurement and Geometry are interconnected and support each other in many ways. In order to understand area and perimeter for triangles and parallelograms, students must be able to think spatially about these shapes.

In lesson 3, students manipulate right triangles to see that two congruent right triangles can always form a rectangle. This allows them to generalize from the formula for finding the area of a rectangle that they have already worked with, to a strategy to find the area of a right triangle.



Then, students cut apart parallelograms to show that any parallelogram can be reconstructed into a rectangle. From this, students are able to develop a strategy to find the area of any parallelogram.



And, once students are comfortable with their strategy to find the area of parallelograms, they can show that any triangle is really half of a parallelogram, leading to a strategy for finding the area of any triangle.



Developing formulas to find the area of parallelograms and triangles ensures that students understand what the formulas mean, and helps students to apply and generalize the formulas later, when presented with more complex shapes.

In Unit B, students will return to the concept of perimeter to develop a strategy to find the circumference of a circle.