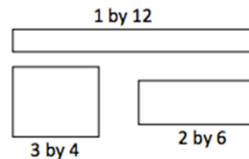
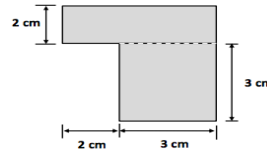


Multiplication and Area

In this 20-day module, students explore area as an attribute of two-dimensional figures and relate it to their prior work with multiplication. Students will build understanding that a 2×6 , 1×12 , and 3×4 rectangle each have the same area, and will learn how to calculate the area of a floor plan of their own design.



Students will learn, through concrete experience, that each of these rectangles has the same area, and relate their learning to multiplication.



Toward the end of this module, students will learn how to calculate the area of an irregular shape like this one by looking at the area of the rectangles within the shape.

Key Terms and Ideas

New Terms:

Area - the amount of two-dimensional space inside a bounded region

Area model - a model for multiplication that relates rectangular arrays to area

Square unit - a unit of area (could be square centimeters, inches, feet, or meters)

Tile (as a verb) - to cover a region without gaps or overlaps

Unit Square - whatever the length unit (e.g. centimeters, inches), a unit square is a 1 unit by 1 unit square of that length

Whole Number - an integer number without fractions

Terms to Review:

Array

Commutative Property

Distribute

Length

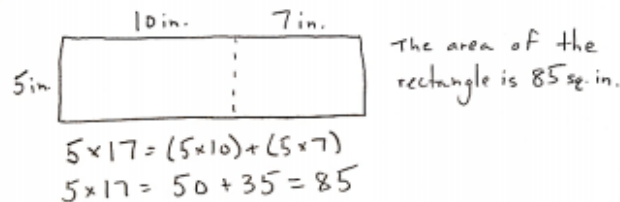
Multiplication

Module 4 Sample Problem (Example taken from Lesson 13)

Anil finds the area of a 5-inch by 17-inch rectangle by breaking it into 2 smaller rectangles. Show one way that he could have solved the problem.

What is the area of the rectangle?

Possible Solution:



+ How you can help at home:

- ⇒ Continue to review multiplication and division math facts with your student
- ⇒ Practice drawing simple two-dimensional rectangular shapes and calculating the area using multiplication

Key Idaho Content Standards:

- **Geometric Measurement: understand concepts of area and relate area to multiplication and to addition**
 - A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area
 - Measure areas by counting unit squares
 - Relate area to the operations of multiplication and addition