

# Eureka Math Parent Guide

A GUIDE TO SUPPORT PARENTS AS THEY WORK WITH THEIR STUDENTS IN MATH.

GRADE 3  
MODULE 4

## GRADE FOCUS

Third Grade mathematics is about (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

- Module 1: Properties of Multiplication and Division and Solving Problems with Units of 2—5 and 10
- Module 2: Place Value and Problem Solving with Units of Measure
- Module 3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10
- » **Module 4: Multiplication and Area**
- Module 5: Fractions as Numbers on the Number Line
- Module 6: Collecting and Displaying Data
- Module 7: Geometry and Measurement Word Problems

## LET'S CHECK IT OUT!

### MODULE 4 FOCUS

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

#### MORE SPECIFICALLY, CHILDREN WILL LEARN HOW TO:

- Recognize area is an attribute of 2-dimensional figures and understand concepts of area measurement.
- Measure areas by counting unit squares (square centimeters, square meters, square inches, and square feet).
- Relate area to the operations of multiplication and addition.

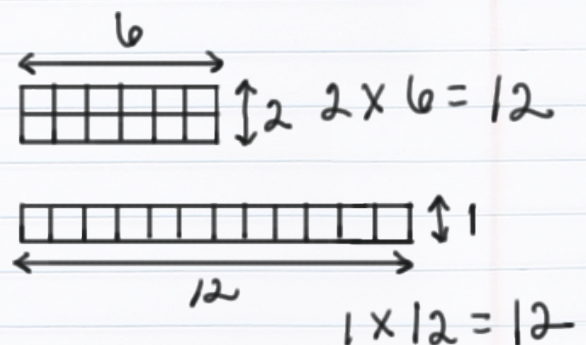
## TOPIC OVERVIEW

Topics are the lessons within a module that help children master the skills above. Here are the lessons that will guide your child through Module 4:

- Topic A: Foundations for Understanding Area
- Topic B: Concepts of Area Measurement
- Topic C: Arithmetic Properties Using Area Models
- Topic D: Applications of Area Using Side Lengths of Figures

## WORDS TO KNOW

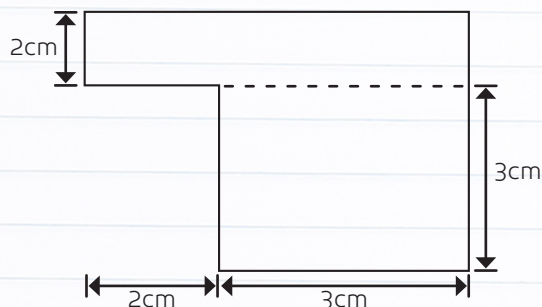
- **Area:** the amount of two-dimensional space inside a bounded region
- **Area model:** a model for multiplication that relates rectangular arrays to area
- **Square unit:** a unit of area (could be square centimeters, inches, feet, or meters)
- **Tile** (as a verb): to cover a region without gaps 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



## SAMPLE PROBLEMS

### SAMPLE 1

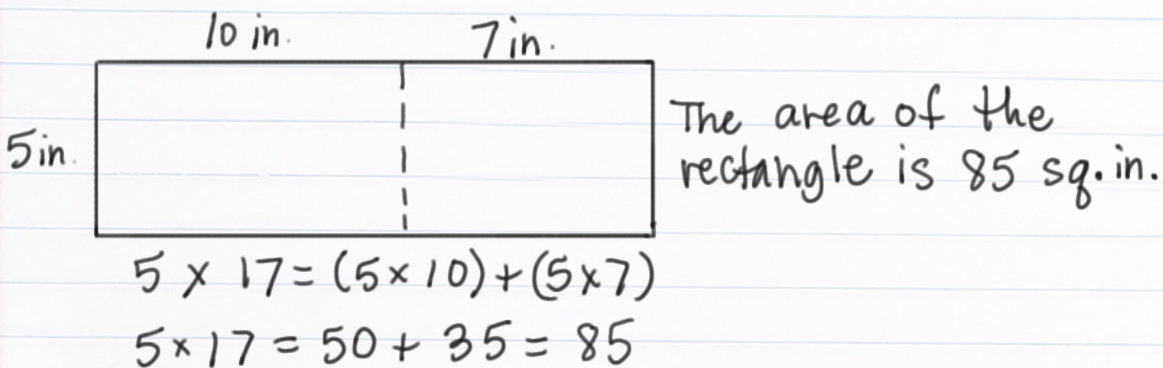
Toward the end of this module, students will learn how to calculate the area of an irregular shape like this one by looking at the area of the rectangles within the shape.



### SAMPLE 2

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?



## 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.