

Grade 3 Module 4

Tips for Families

Key Concepts Overview

Focus TEKS: **3.6C, 3.6D**

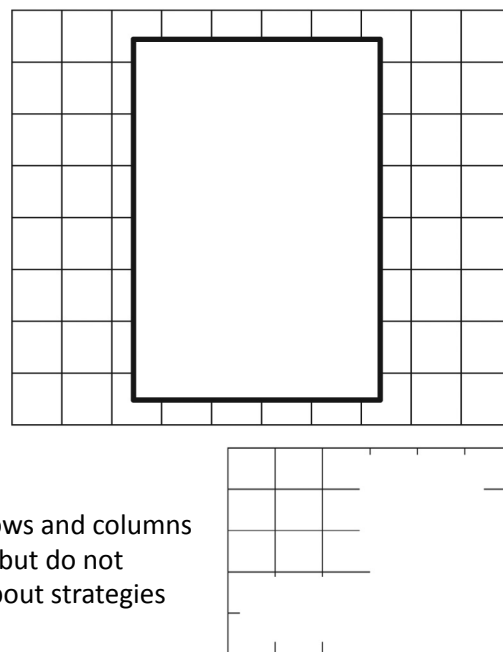
The focus of Module 4 is exploring area as an attribute of two-dimensional figures and relating it to prior understandings of multiplication. Your student will:

- ☐ Label the side lengths of rectangles based on the number of square tiles shown.
- ☐ Skip-count to find the unknown **area** and write **multiplication** sentences that describe an **array**.
- ☐ Find the unknown side **length** when given the area and one side length of a rectangle.
- ☐ Draw rows and columns to determine the area of a rectangle given an incomplete array.
- ☐ Use multiplication to determine the area of a rectangle.
- ☐ Break apart rectangles and reconnect the pieces to form new rectangles, showing that the areas are still the same.
- ☐ Find the total area of combined rectangles when given the dimensions of some of the side lengths.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

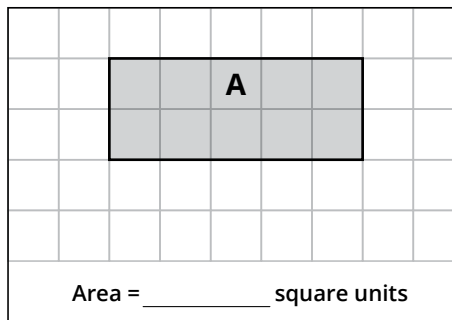
- Cut out a rectangle from a piece of graph paper. (There is free printable graph paper online or ask your student's teacher for some.) Use sticky notes to cover up part of the rectangle. Ask your student to find the area of the entire rectangle without removing the sticky note. Students can look at the part of the grid paper not covered by the rectangle to determine the number of columns and rows the sticky note is covering.
- If you have a floor with square tiles, use painter's tape to mark off a rectangular area. Cover part of the taped-off area with a towel or rug. Ask your student to find out how many tiles are in the taped-off area without moving the towel or rug.
- Draw a rectangle on paper. Use a ruler to begin drawing rows and columns inside the rectangle to create a grid of squares, as shown, but do not complete it. Ask your student to complete the grid. Talk about strategies that would work to complete the array.



- Give your student some graph paper. Ask her to design a public place of her choice by using rectangles. She might choose to design a skate park, a mall, a community garden, or whatever else sparks her imagination. Help her determine the side lengths of the rectangles and calculate the area of the design.

Terms

Area (Área): the measurement attribute that describes the number of unit squares (or square units) a figure or region covers



Commutative property of multiplication (Propiedad conmutativa): changing the order of the factors in a multiplication expression or equation does not change its product

$$4 \times 2 = 8$$

$$2 \times 4 = 8$$

Distribute (Distribuir): to multiply each part of a decomposed factor by the other factor, or to divide each part of a decomposed total by the divisor

$$6 \times 4 = \underline{\quad}$$

$$(5 \times 4) = 20$$

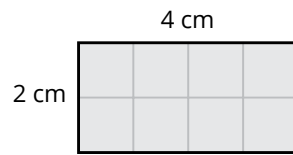
$$(1 \times 4) = 4$$

$$(6 \times 4) = (5 \times 4) + (1 \times 4)$$

$$= 20 + 4$$

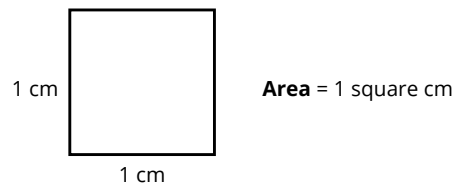


Length: the distance measurement between two points



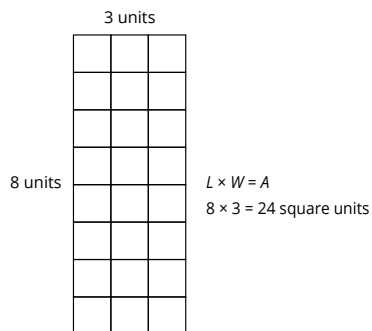
The side lengths of the rectangle are 2 cm and 4 cm.

Square unit: a unit of area in the shape of a square that has side lengths of 1 unit



Models

Area Model



Array

