

KEY CONCEPT OVERVIEW

In Lessons 10 through 15, students work with **area**. They focus on rectangular figures with fractional side lengths.

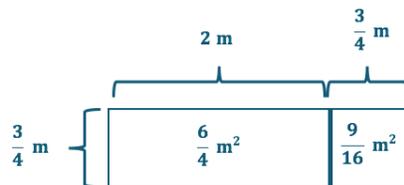
You can expect to see homework that asks your child to do the following:

- Find the area of rectangular figures with fractional side lengths by multiplying the length by the width (as shown in the Sample Problem below).
- Sketch rectangles given their fractional side lengths, and then find the areas.
- Use an inch ruler to measure the lengths and the widths of rectangles to the nearest $\frac{1}{4}$ inch, and then find the areas.
- Solve word problems involving area.

SAMPLE PROBLEM (From Lesson 12)

Find the area of a rectangle with the following dimensions. Explain your thinking using the **area model**.

$$2\frac{3}{4} \text{ m} \times \frac{3}{4} \text{ m}$$



$$\begin{aligned} & \frac{6}{4} + \frac{9}{16} \\ &= \frac{24}{16} + \frac{9}{16} \\ &= \frac{33}{16} \\ &= 2\frac{1}{16} \end{aligned}$$

The area of the rectangle is $2\frac{1}{16} \text{ m}^2$.

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- At the dinner table or on the go, help your child practice finding the area of a rectangle. Choose values for the dimensions of a rectangle that are based on multiplication facts your child knows. For example, you say, “The length of a rectangle is 8 yards, and the width of the rectangle is 9 yards. What’s the area of the rectangle?” He says, “8 yards times 9 yards equals 72 square yards.”

HOW YOU CAN HELP AT HOME
(continued)

- Play the Find the Area card game with your child.
 1. Remove the jacks, queens, kings, and jokers from a deck of cards. Let aces have a value of one.
 2. Put the stack of remaining cards facedown.
 3. Flip two cards to form a fraction that represents the length of a rectangle.
 4. Have your child flip two cards to form a fraction that represents the width of the rectangle.
 5. Choose a unit of measure for the dimensions of the rectangle, such as inches, feet, or meters.
 6. Write the multiplication expression for the area of the rectangle, length times width, and ask your child to find the area of the rectangle.

For example, you flip two cards with the numbers 9 and 2. They represent $\frac{9}{2}$. You decide to use meters for the dimensions, so the length of the rectangle is $\frac{9}{2}$ m. Your child flips two cards with the numbers 1 and 3. They represent the fraction $\frac{1}{3}$, so the width of the rectangle is $\frac{1}{3}$ m. You write $\frac{9}{2}$ m \times $\frac{1}{3}$ m. She writes $\frac{9}{2}$ m \times $\frac{1}{3}$ m = $\frac{9}{6}$ m² = $1\frac{3}{6}$ m².

TERMS

Area: The amount of space inside a two-dimensional shape. For example, in rectangles, Area = length \times width.

MODELS

Area Model

$$2\frac{3}{4} \text{ ft} \times 1\frac{3}{4} \text{ ft} = 4\frac{13}{16} \text{ ft}^2$$

