

Lesson 12

Objective: Measure to find the area of rectangles with fractional side lengths.

1. Find the area of rectangles with the following dimensions. Explain your thinking using the area model.

a. $1 \text{ ft} \times 1\frac{1}{2} \text{ ft}$

b. $1\frac{1}{2} \text{ yd} \times 1\frac{1}{2} \text{ yd}$

c. $2\frac{1}{2} \text{ yd} \times 1\frac{3}{16} \text{ yd}$

2. Hanley is putting carpet in her house. She wants to carpet her living room, which measures $15 \text{ ft} \times 12\frac{1}{3} \text{ ft}$. She also wants to carpet her dining room, which is $10\frac{1}{4} \text{ ft} \times 10\frac{1}{3} \text{ ft}$. How many square feet of carpet will she need to cover both rooms?

3. Fred cut a $9\frac{3}{4}$ -inch square of construction paper for an art project. He cut a square from the edge of the big rectangle whose sides measured $3\frac{1}{4}$ inches. (See the picture below.)

a. What is the area of the smaller square that Fred cut out?

b. What is the area of the remaining paper?

