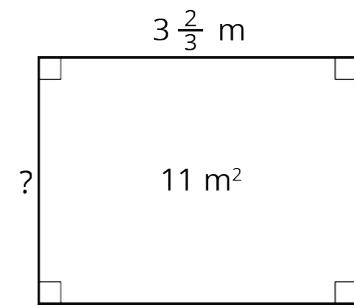


## Unit 4 Lesson 13 Cumulative Practice Problems

1. a. Find the unknown side length of the rectangle if its area is  $11 \text{ m}^2$ . Show your reasoning.



- b. Check your answer by multiplying it by the given side length ( $3\frac{2}{3}$ ). Is the resulting product 11? If not, revise your previous work.
2. A worker is tiling the floor of a rectangular room that is 12 feet by 15 feet. The tiles are square with side lengths  $1\frac{1}{3}$  feet. How many tiles are needed to cover the entire floor? Show your reasoning.
3. A television screen has length  $16\frac{1}{2}$  inches, width  $w$  inches, and area 462 square inches. Select **all** the equations that represent the relationship of the side lengths and area of the television.

A.  $w \cdot 462 = 16\frac{1}{2}$

B.  $16\frac{1}{2} \cdot w = 462$

C.  $462 \div 16\frac{1}{2} = w$

D.  $462 \div w = 16\frac{1}{2}$

E.  $16\frac{1}{2} \cdot 462 = w$

4. The area of a rectangle is  $17\frac{1}{2} \text{ in}^2$  and its shorter side is  $3\frac{1}{2}$  in. Draw a diagram that shows this information. What is the length of the longer side?

5. A bookshelf is 42 inches long.

a. How many books of length  $1\frac{1}{2}$  inches will fit on the bookshelf? Explain your reasoning.

b. A bookcase has 5 of these bookshelves. How many feet of shelf space is there? Explain your reasoning.

(From Unit 4, Lesson 12.)

6. Find the value of  $\frac{5}{32} \div \frac{25}{4}$ . Show your reasoning.

(From Unit 4, Lesson 11.)

7. How many groups of  $1\frac{2}{3}$  are in each of these quantities?

a.  $1\frac{5}{6}$

b.  $4\frac{1}{3}$

c.  $\frac{5}{6}$

(From Unit 4, Lesson 6.)

8. It takes  $1\frac{1}{4}$  minutes to fill a 3-gallon bucket of water with a hose. At this rate, how long does it take to fill a 50-gallon tub? If you get stuck, consider using a table.

(From Unit 2, Lesson 14.)