

Name \_\_\_\_\_

## Area and Tiling

**Essential Question** How can you use tiling to find the area of a rectangle?

### UNLOCK the Problem REAL WORLD

Rhonda is tiling the floor of her new sunroom. The diagram shows the layout of the tiles. Each tile measures 4 square feet. What is the area of Rhonda's sunroom floor?

To find the area of the sunroom floor, you can combine the areas of the half tiles and the whole tiles.

**Find the area of the sunroom floor.**

**STEP 1** Find the area of the half tiles.

Count the number of half tiles. \_\_\_\_\_

1 tile = 4 square feet, so 1 half tile =  $4 \div 2$  or \_\_\_\_\_ square feet.

Multiply the number of half tiles by \_\_\_\_\_ square feet to find the area of the half tiles:

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ square feet

**STEP 2** Find the area of the whole tiles.

Find the number of whole tiles:  $b \times h =$  \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ tiles

Since the area of 1 tile is \_\_\_\_\_ square feet, multiply the number of whole tiles by \_\_\_\_\_ to find the area of the whole tiles.

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ square feet

**STEP 3** Find the total area.

Add the areas of the half tiles and whole tiles.

half tiles      whole tiles

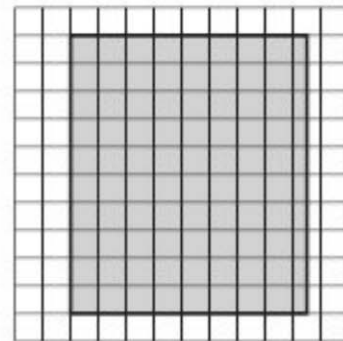


\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ square feet

So, the area of Rhonda's sunroom floor is \_\_\_\_\_ square feet.

- Underline what you are asked to find.
- Circle the information you will use to solve the problem.

**Rhonda's Sunroom Floor**



1 tile = 4 square feet

**Remember**

The formula for the area of a rectangle is  $A = b \times h$  or  $l \times w$ .

**Math Talk**

Explain how to find the area of 6 half tiles if 1 whole tile is 9 square inches.

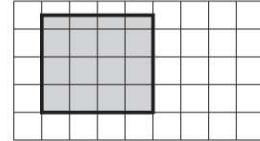
# Share and Show



1. Find the area of the shaded shape.

**STEP 1** Find the area of the half squares:

\_\_\_\_\_ half squares  $\times$  \_\_\_\_\_ square yards = \_\_\_\_\_ square yards



1 square = 16 square yards

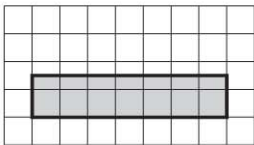
**STEP 2** Find the area of the whole squares:

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ squares  
 \_\_\_\_\_ squares  $\times$  \_\_\_\_\_ square yards = \_\_\_\_\_ square yards

**STEP 3** Find the total area: \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_ square yards

Find the area of each shaded shape. Write the area in square units.

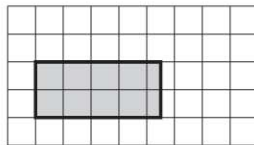
2.



1 square = 4 square yards

\_\_\_\_\_

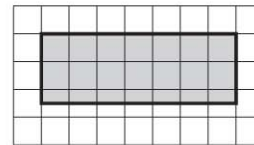
3.



1 square = 9 square feet

\_\_\_\_\_

4.



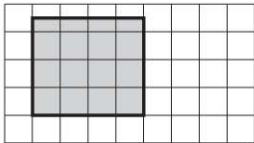
1 square = 4 square meters

\_\_\_\_\_

## On Your Own

Find the area of each shaded shape. Write the area in square units.

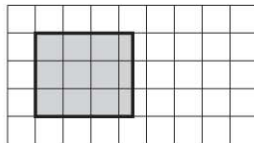
5.



1 square = 9 square miles

\_\_\_\_\_

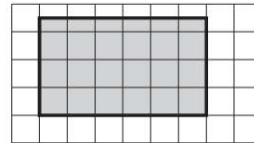
6.



1 square = 16 square meters

\_\_\_\_\_

7.



1 square = 25 square meters

\_\_\_\_\_

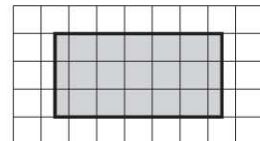
## Problem Solving



8. A mosaic table top is shown. Each square has an area of 5 square inches. What is the area of the table top? **Explain.**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Table Top**



1 square = 5 square inches