



Think It Through

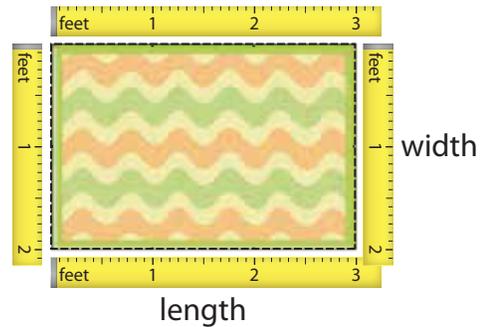
What are some ways that we measure shapes?



Think about different ways you can measure a rug that has the shape of a rectangle.

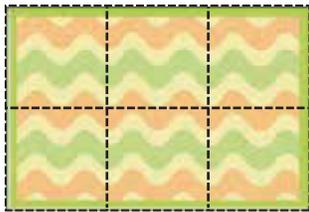
You can measure the length of the rug. The length tells how long the rug is from one end to the other. The rug at the right is 3 feet long.

You can also measure the width of the rug. The width tells how wide the rug is from one side to the other. The rug at the right is 2 feet wide.



Think When you measure area, you measure both length and width.

Suppose you want to know the area of the rug. What you want to know is how much floor the rug covers. **Area** is the amount of space a shape covers.



Underline the sentence that tells what area is.

You can use a measuring tape to find out how long the rug is and to find out how wide it is. But that won't tell you how much of the floor the rug covers. You want to know about the space between the sides of the rug.

Think Area is the amount of space a shape covers.

You measure area in **square units**.

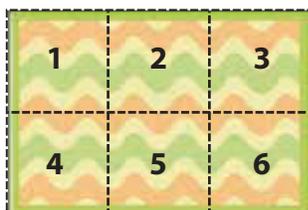


This square has an area of 1 square unit.



When I measure area, I make sure the square units line up with the edges of the shape. I also make sure the squares do not overlap or have gaps between them.

You can measure area by covering a shape with same-sized squares without gaps or overlaps. Then count to find out how many same-sized squares, or square units, cover the shape.



The rug is covered by 6 square units with no gaps or overlaps. So, the area of the rug is 6 square units.

▶ Reflect

1 Explain how you use square units to find the area of a shape.

Think About Area Using Different Square Units



Let's Explore the Idea You find area by measuring and counting square units.



- 2** Use an inch ruler to measure the length and width of one square unit in Square A.

The square unit is _____ inch long and _____ inch wide.

So, 1 square unit has an area of _____ square inch.

- 3** Count the square units in Square A to find the area. The area of Square A is _____ square inches.

- 4** Use a centimeter ruler to measure the length and width of one square unit in Rectangle B.

The square unit is _____ centimeter long and _____ centimeter wide.

So, 1 square unit has an area of _____ square centimeter.

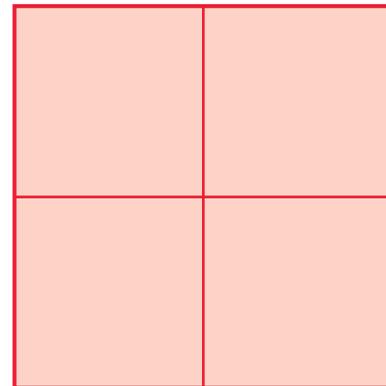
- 5** Count the square units in Rectangle B to find the area.

The area of Rectangle B is _____ square centimeters.

- 6** Suppose Square A is divided into smaller-sized square units. Can you also count these square units to describe the area of Square A? _____

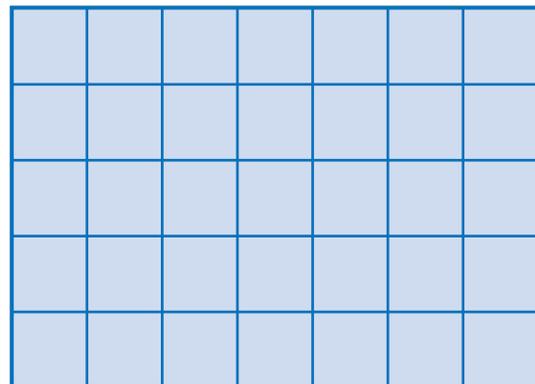
- 7** Does the size of the square unit that is used to cover a shape make a difference in how you find the area? Explain.

Square A



1 square unit

Rectangle B



1 square unit

Let's Talk About It

Solve the problems below as a group.



8 How is finding the area of the Square A in square inches like finding the area of Rectangle B in square centimeters? _____

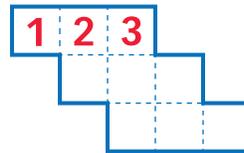
9 If you found the area of Square A in square centimeters, do you think the number of square centimeters would be greater or less than the number of square inches you found for its area? Explain. _____

10 Suppose you were measuring the area of a door. Would you need more square feet or more square inches to cover the door? Why? _____

11 Number each square unit in the shapes below. Count the square units to find the area.

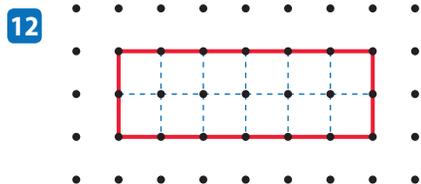


Area = _____ square units

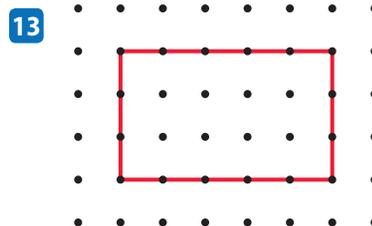


Area = _____ square units

► **Try It Another Way** Work with your group to find the area of each shape.



Area = _____ square units

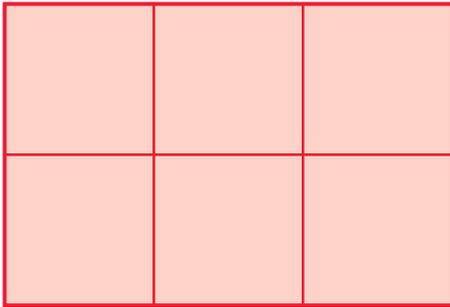


Area = _____ square units

Connect  **Ideas About Finding Area**

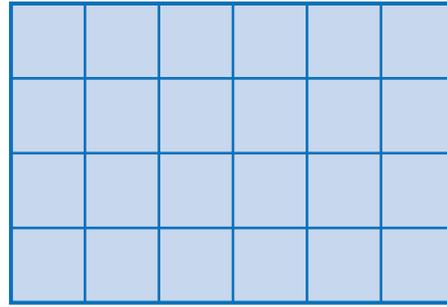
Talk through these problems as a class, then write your answers below.

14 Compare Find the area of each shape below.



Each  has an area of 1 square unit.

Area = _____



Each  has an area of 1 square centimeter.

Area = _____

15 Examine Anna counted the units in this rectangle. She said the area of the rectangle is 12 square units. What did Anna do wrong?

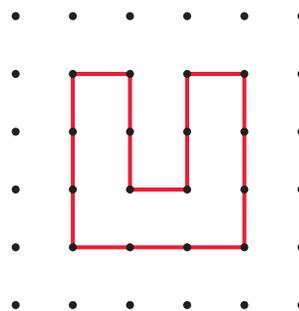
1	2	3
4	5	6
7	8	9
10	11	12

16 Relate Think about how you could find the area of this shape.

First draw the square units.

Then number the square units to find the area of the shape.

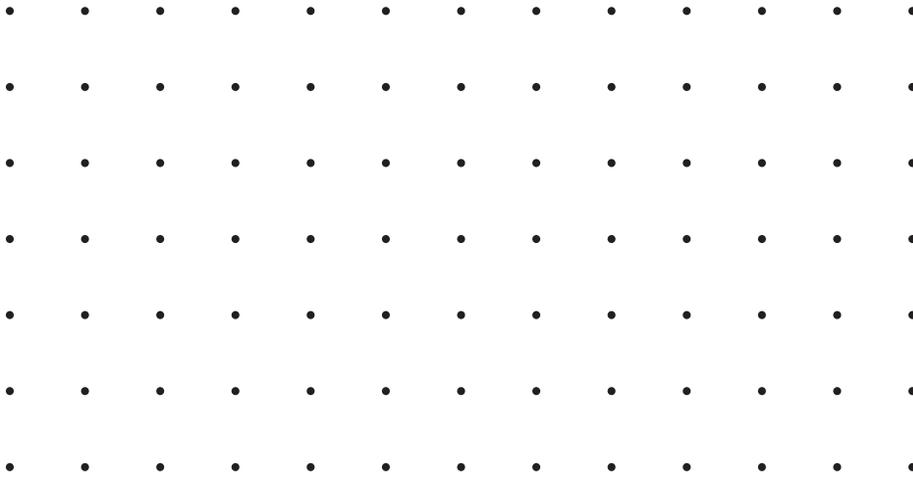
Area = _____ square units



Apply  **Ideas About Finding Area**

17 Put It Together Use what you have learned to complete the task. Use a centimeter ruler.

Part A Draw a rectangle with an area of 8 square centimeters.



Part B Draw another rectangle with an area greater than 8 square centimeters.



Part C How did you know how to draw a rectangle with an area that is greater than 8 square centimeters?
