Name _____

Find the Area

I Can solve real-world problems involving the area of a rectangle.

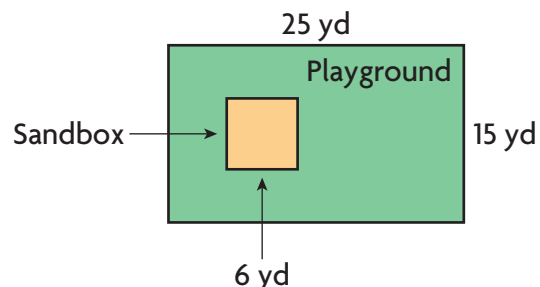## ▦ UNLOCK the Problem Real World

A landscaper is laying grass for a rectangular playground. The grass will cover the whole playground except for a square sandbox. The diagram shows the playground and sandbox. How many square yards of grass will the landscaper use?

Use the graphic organizer below to solve the problem.

25 yd

Playground

Sandbox →

15 yd

6 yd

Read the Problem

What do I need to find?

I need to find how many

_____ the landscaper will use.

What information do I need to use?

The grass will cover the _____.

The grass will not cover the

_____.

The length and width of the playground are

_____ and _____.

The side length of the square sandbox is

_____.

How will I use the information?

I can solve simpler problems.

Find the area of the _____.

Find the area of the _____.

Then _____ the area of the _____

from the area of the _____.

Solve the Problem

First, find the area of the playground.

$A = b \times h$

$= \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$ square yards

Next, find the area of the sandbox.

$A = s \times s$

$= \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$ square yards

Last, subtract the area of the sandbox from the area of the playground.

$$\begin{array}{r} 375 \\ -\ 36 \\ \hline \end{array}$$ square yards

So, the landscaper will use _____

_____ of grass to cover the playground.

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

How did the strategy help you solve the problem?

Try Another Problem

Zach is laying a rectangular brick patio for a new museum. Brick will cover the whole patio except for a rectangular fountain, as shown in the diagram. How many square meters of brick does Zach need?

20 m
Brick Patio
5 m → Fountain
18 m
2 m
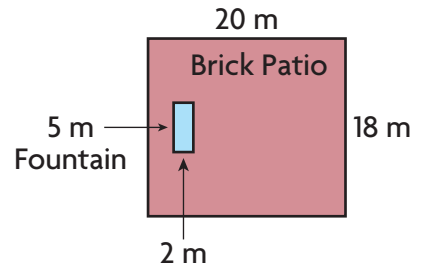
Read the Problem	Solve the Problem
What do I need to find?	
What information do I need to use?	
How will I use this information?	

- How many square meters of brick does Zach need? Explain.

_____

_____

_____

Name _____

Share and Show   Math Board

1. Lila is wallpapering one wall of her bedroom, as shown in the diagram. She will cover the whole wall except for the doorway. How many square feet of wall does Lila need to cover?

   First, find the area of the wall.

   $A = b \times h$

   $= $ _____ $\times$ _____

   $= $ _____ square feet

   Next, find the area of the door.

   $A = b \times h$

   $= $ _____ $\times$ _____

   $= $ _____ square feet

   Last, subtract the area of the door from the area of the wall.

   _____ $-$ _____ $= $ _____ square feet

   So, Lila needs to cover _____ of wall.

   12 ft

   Wall

   8 ft

   7 ft
   Door

   3 ft
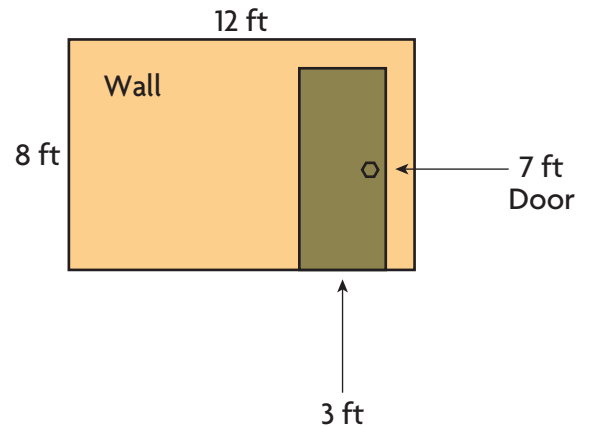
2. What if there was a square window on the wall with a side length of 2 feet? How much wall would Lila need to cover then? Explain.

   _____

   _____

   _____

3. Ed is building a model of a house with a flat roof, as shown in the diagram. There is a chimney through the roof. Ed will cover the roof with square tiles. If the area of each tile is 1 square inch, how many tiles will he need? Explain.
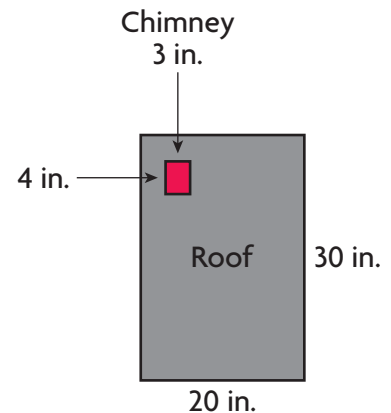
   _____

   _____

   _____

   Chimney
   3 in.

   4 in.

   Roof   30 in.

   20 in.

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4. **MTR** Lia has a dog and a cat. Together, the pets weigh 28 pounds. The dog weighs 3 times as much as the cat. How much does each pet weigh?

_____

5. Mr. Foster is covering two rectangular pictures with glass. One is 6 inches by 4 inches and the other one is 5 inches by 5 inches. Does he need the same number of square inches of glass for each picture? Explain.

_____

_____

MATH
on the
▶ **Spot**

6. Claire says the area of a square with a side length of 100 centimeters is greater than the area of a square with a side length of 1 meter. Is she correct? Explain.

_____

_____

_____

Show the Math

Demonstrate Your Thinking

7. A rectangular floor is 12 feet long and 11 feet wide. Janine places a rug that is 9 feet long and 7 feet wide and covers part of the floor in the room. Select the word(s) to complete the sentence.

To find the number of square feet of the floor that is NOT covered by the rug,
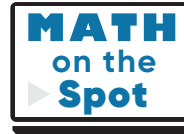
add		area of the rug	from	
subtract	the	length of the rug	by	the area of the floor.
multiply		area of the floor	to	