

Name \_\_\_\_\_

# Multi-Step Multiplication Problems

**I Can** solve real-world problems involving multiplication of whole numbers.

## Florida's B.E.S.T.

- Algebraic Reasoning 4.AR.1.1
- Number Sense & Operations 4.NSO.2.3, 4.NSO.2.1
- Mathematical Thinking & Reasoning MTR.2.1, MTR.3.1, MTR.4.1, MTR.6.1



## UNLOCK the Problem Real World

At the sea park, one section in the stadium has 9 rows with 18 seats in each row. In the center of each of the first 6 rows, 8 seats are in the splash zone. How many seats are not in the splash zone?

Use the graphic organizer to help you solve the problem.



### Read the Problem

#### What do I need to find?

I need to find the number of seats that \_\_\_\_\_ in the splash zone.

#### What information do I need to use?

There are 9 rows with 18 seats in each row of the section.

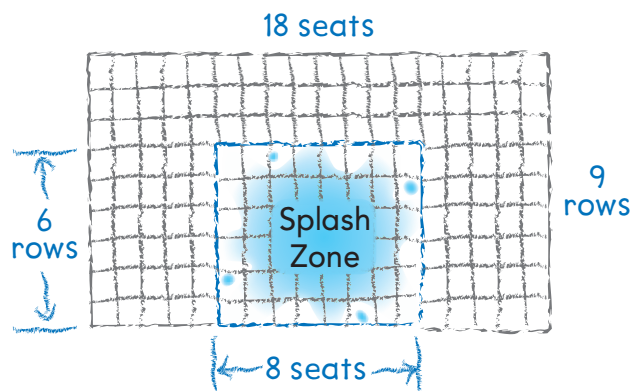
There are 6 rows with 8 seats in each row of the splash zone.

#### How will I use the information?

I can \_\_\_\_\_ to find both the number of seats in the section and the number of seats in the splash zone.

### Solve the Problem

I drew a diagram of the section to show 9 rows of 18 seats. In the center, I outlined a section to show the 6 rows of 8 seats in the splash zone.

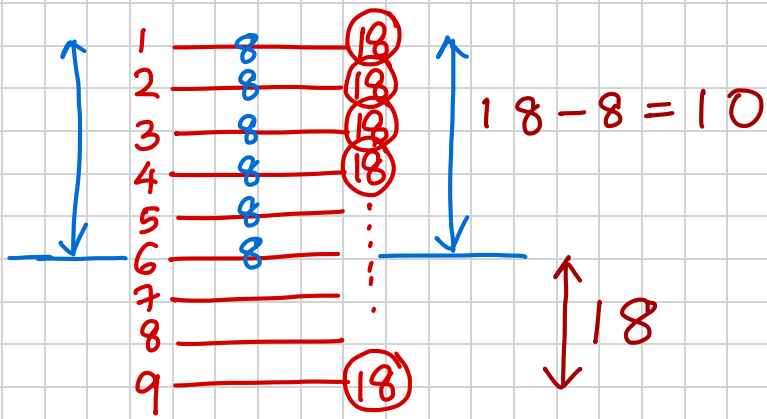


$$\begin{array}{r}
 \text{Total} \\
 18 \\
 \times 9 \\
 \hline
 162 \leftarrow \text{total number of seats in the section}
 \end{array}
 \qquad
 \begin{array}{r}
 8 \\
 \times 6 \\
 \hline
 48 \leftarrow \text{seats in the splash zone}
 \end{array}$$

1. What else do you need to do to solve the problem?

$$\text{non splash} = 162 - 48 = 114$$

**Go Online** For more help



$$\begin{array}{r} 2 \\ 18 \\ \times 3 \\ \hline 54 \end{array}$$

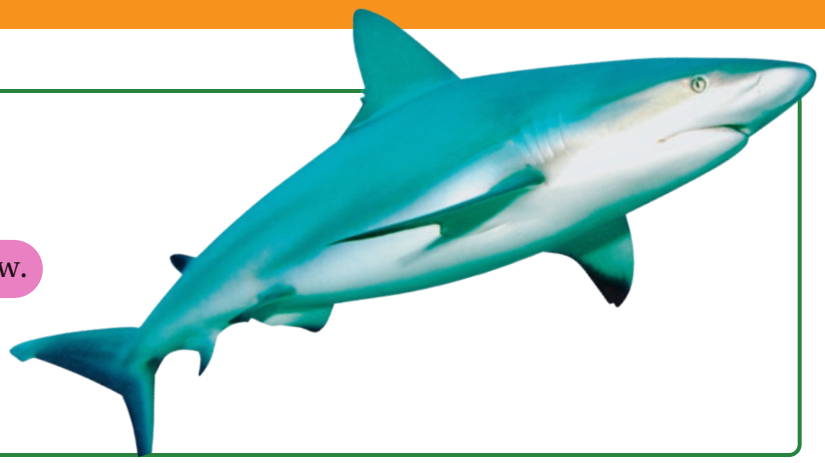
$$6 \text{ rows} \rightarrow 10 \times 6 = 60$$

$$3 \text{ rows} \rightarrow 18 \times 3 = 54$$

$$\begin{array}{r} \text{total non splash} = 60 \\ + 54 \\ \hline 114 \end{array}$$

## Try Another Problem

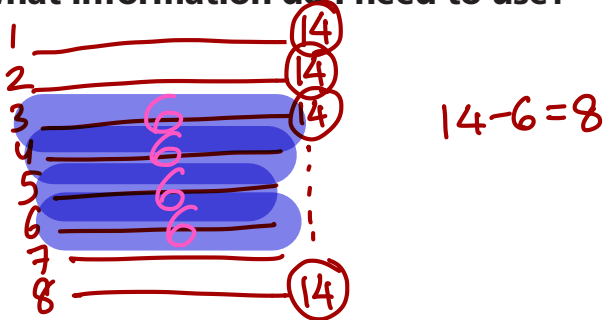
At the sea park, one section of the shark theater has 8 rows with 14 seats in each row. In the middle of the section, 4 rows of 6 seats are reserved. How many seats are not reserved?



### Read the Problem

What do I need to find?

What information do I need to use?



How will I use the information?

### Solve the Problem

$$14 \times 4 = 56$$

$$8 \times 4 = 32$$

$$\begin{array}{r} 14 \\ \times 4 \\ \hline \end{array}$$

total non reserved

$$56 + 32 = 88$$

**Math Talk**

**MTR 6.1** Assess the reasonableness of solutions.

How do you know your answer is correct?

2. How did your diagram help you solve the problem?

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# Share and Show



- The seats in Sections A and B of the stadium are all taken for the last show. Section A has 8 rows of 14 seats each. Section B has 6 rows of 16 seats each. How many people are seated in Sections A and B for the last show?

First, draw and label a diagram. Next, find the number of seats in each section.

**Section A**

$8 \times 14 = 112$

**Section B**

$6 \times 16 = 96$

Last, find the total number of seats.  $112 + 96 = 208$

There are 208 people seated in Sections A and B for the last show.

- ~~2.~~ What if Sections A and B each had 7 rows? How many people would have been seated in Sections A and B?

- Mei's vegetable garden has 13 rows with 8 plants in each row. Mei plans to plant peppers in the first 2 rows and the last 2 rows of the garden. The rest of the rows will be tomatoes. How many tomato plants will Mei plant?

$9 \times 8 = 72$  tomato plants

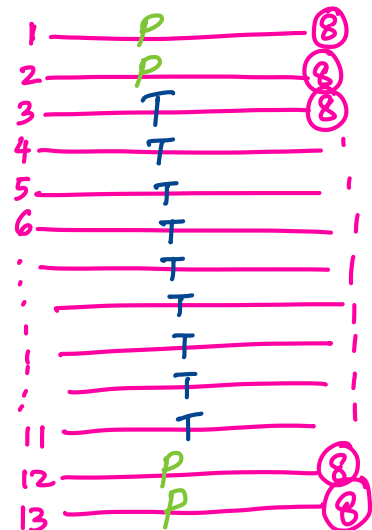
- There are 8 rows of 22 chairs set up for an awards ceremony at the school. In each row, the 2 chairs on each end are reserved for students receiving awards. The rest of the chairs are for guests. How many chairs are there for guests?

## Unlock the Problem

- ✓ Use the Problem Solving MathBoard
- ✓ Underline important facts.
- ✓ Choose a strategy you know.

## Show the Math

Demonstrate Your Thinking



$9 \times 8 = 72$  tomato plants