LESSON MAKER PRO

Squares in Rows

Find rectangle area by multiplying and counting.

GRADE 3 · 3.MD.7a

3.MD.7a "Relate area to the operations of multiplication and addition. Find the area of a rectangle with whole-number side lengths (dimensions) by multiplying them. Show that this area is the same as when counting unit squares."

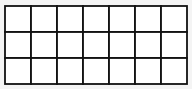
NAME _____ DATE _____

THE BIG IDEA

A rectangle made of unit squares has the same number of squares in each row. Multiply the number of rows by the number of squares in each row to find the area. You can check by adding the squares in each row.

WORKED EXAMPLE

What is the area of this array?

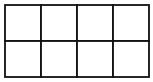


1. Count 3 rows.
2. Count 7 unit squares in each row.
3. Multiply: 3 x 7 = 21.
4. Check by counting rows: 7 + 7 + 7 = 21.

Answer: 21 square units

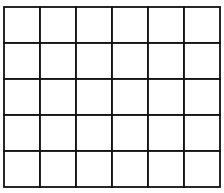
PRACTICE 6 problems

1 How many unit squares are in this array?



ANSWER _____

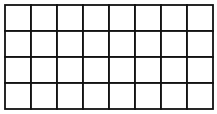
2 Find the area of this array. Then write an addition equation that counts its squares by rows.



ANSWER _____

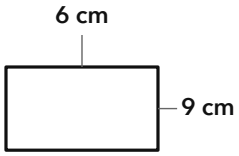
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3 What is the area of this array?



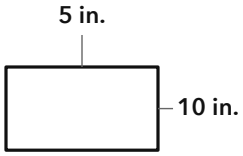
ANSWER _____

4 Find the area of this rectangle.



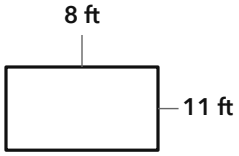
ANSWER _____

5 Find the area of this rectangle.



ANSWER _____

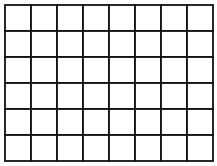
6 Find the area of this rectangle.



ANSWER _____

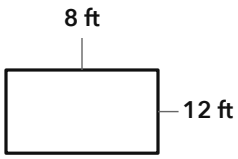
APPLY IT Show your work

1 A sticker sheet has one sticker in each square. How many stickers are on the sheet?



ANSWER _____

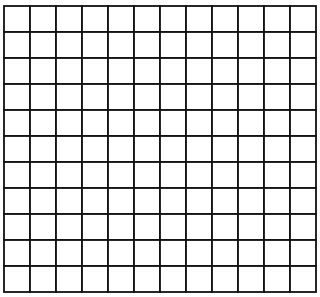
2 Your dog has a rectangular play mat with the measurements shown. What is its area in square feet?



ANSWER _____

CHALLENGE One step up

Find the area of this array by multiplying. Then split its rows into two groups and explain how counting both groups checks your answer.



WORK SPACE AND ANSWER

ANSWER KEY

Squares in Rows

GRADE 3 · 3.MD.7a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	How many unit squares are in this array?	**8 unit squares**
2	Find the area of this array. Then write an addition equation that counts its squares by rows.	**30 square units; 6 + 6 + 6 + 6 + 6 = 30**
3	What is the area of this array?	**32 square units**
4	Find the area of this rectangle.	**54 square cm**
5	Find the area of this rectangle.	**50 square in.**
6	Find the area of this rectangle.	**88 square ft**

PART 2 · APPLY IT

1. **48 stickers** The array has 6 rows of 8 squares. Multiply 6 x 8 = 48.
2. **96 square ft** Multiply the side lengths: 8 x 12 = 96 square feet.

CHALLENGE

11 x 12 = 132 square units. For example, 5 rows have 60 squares and 6 rows have 72 squares. Together, 60 + 72 = 132 squares.

Accept side lengths in either order when students multiply. For the challenge, accept any split of the rows into two groups if both counts add to 132.