

Area Array Quest

Use rows, columns, and multiplication to find area.

GRADE 3 • MA.3.GR.2.2

MA.3.GR.2.2 "Find the area of a rectangle with whole-number side lengths using a visual model and a multiplication formula."

NAME _____

DATE _____

ROWS TIMES COLUMNS

Area tells how many square units cover a rectangle. Count the rows and columns in a model, then multiply length x width. Write your answer in square units.

WORKED EXAMPLE

Find the area of a rectangle with 3 rows and 7 columns.

1. The model has 3 rows with 7 squares in each row.
2. Multiply: $3 \times 7 = 21$.
3. Area = 21 square units.

Answer: 21 square units

PRACTICE 6 problems

- 1** Find the area of this rectangle model. Each box shows a square unit. []

ANSWER _____

- 2** A rectangle is 5 units long and 6 units wide. Find its area.

ANSWER _____

- 3** Find the area of this rectangle model. Each box shows a square unit. []

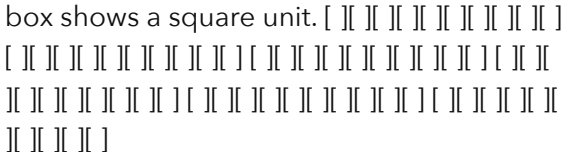
ANSWER _____

- 4** A rectangle is 9 units long and 4 units wide. Find its area.

ANSWER _____

- 5** A rectangle is 11 units long and 5 units wide. Find its area.

ANSWER _____

- 6** Find the area of this rectangle model. Each box shows a square unit. []

ANSWER _____

APPLY IT Show your work

- 1** At a school fair, Mia covers a rectangular game table with paper. The paper is 8 feet long and 6 feet wide. What is the area of the paper?

WORK SPACE

ANSWER _____

- 2** A rectangular pet play mat is 9 feet long and 5 feet wide. What is the area of the mat?

WORK SPACE

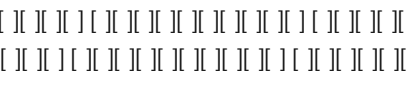
ANSWER _____

CHALLENGE One step up

CHALLENGE

A rectangular art display is 12 inches long and 4 inches wide. A second rectangular art display is 10 inches long and 5 inches wide. Which display has the greater area? How many square inches greater is it?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find the area of this rectangle model. Each box shows a square unit. []	8 square units
2	A rectangle is 5 units long and 6 units wide. Find its area.	30 square units
3	Find the area of this rectangle model. Each box shows a square unit. []	16 square units
4	A rectangle is 9 units long and 4 units wide. Find its area.	36 square units
5	A rectangle is 11 units long and 5 units wide. Find its area.	55 square units
6	Find the area of this rectangle model. Each box shows a square unit. []	60 square units

PART 2 • APPLY IT

- 1. 48 square feet** Multiply the length by the width: $8 \times 6 = 48$. The paper covers 48 square feet.
- 2. 45 square feet** Multiply the length by the width: $9 \times 5 = 45$. The mat has an area of 45 square feet.

CHALLENGE

The second display has the greater area. It is 2 square inches greater.

Accept multiplication equations in either order and answers stated with square units. For the challenge, accept work showing areas of 48 square inches and 50 square inches before the comparison.