LESSON MAKER PRO

Square Space Detectives

Find the space inside and the distance around squares.

GRADE 4 · 4.MG.3.c

4.MG.3.c "Determine the area and perimeter of a square when given the measure of one side (in whole number units), with and without models."

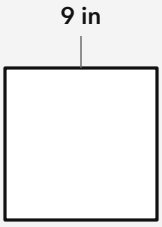
NAME _____ DATE _____

SQUARE RULES

For a square, multiply one side length by itself to find area. To find perimeter, add all four equal sides, or multiply one side length by 4.

WORKED EXAMPLE

Use the square shown. Find its area and perimeter.

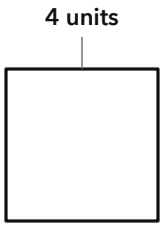


1. The side length is 9 in.
2. Area: 9 × 9 = 81 square in.
3. Perimeter: 4 × 9 = 36 in.

Answer: Area = 81 square in.; perimeter = 36 in.

PRACTICE 6 problems

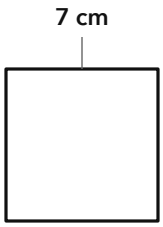
1 Use the square shown. Find its area and perimeter.



ANSWER _____

_____

2 Use the square shown. Find its area and perimeter.



ANSWER _____

_____

3 A square has a side length of 3 m. Find its area and perimeter.

ANSWER _____

_____

4 A square has a side length of 5 in. Find its area and perimeter.

ANSWER _____

_____

5 A square has a side length of 8 ft. Find its area and perimeter.

ANSWER _____

_____

6 A square has a side length of 12 yd. Find its area and perimeter.

ANSWER _____

_____

APPLY IT Show your work

1 Maya is making a square art display with a side length of 6 ft. How much paper covers the display? How many feet of border does she need around it?

WORK SPACE

ANSWER _____

2 A square basketball shooting mat has a side length of 10 ft. What is the area of the mat? What is its perimeter?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A square game board has a side length of 13 cm. Find its area and perimeter. Then explain why area and perimeter use different operations.

WORK SPACE AND ANSWER

ANSWER KEY

Square Space Detectives

GRADE 4 · 4.MG.3.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the square shown. Find its area and perimeter.	**Area = 16 square units; perimeter = 16 units.**
2	Use the square shown. Find its area and perimeter.	**Area = 49 square cm; perimeter = 28 cm.**
3	A square has a side length of 3 m. Find its area and perimeter.	**Area = 9 square m; perimeter = 12 m.**
4	A square has a side length of 5 in. Find its area and perimeter.	**Area = 25 square in.; perimeter = 20 in.**
5	A square has a side length of 8 ft. Find its area and perimeter.	**Area = 64 square ft; perimeter = 32 ft.**
6	A square has a side length of 12 yd. Find its area and perimeter.	**Area = 144 square yd; perimeter = 48 yd.**

PART 2 · APPLY IT

1. **Paper: 36 square ft; border: 24 ft.** Multiply 6 × 6 to find the paper area. Multiply 4 × 6 to find the border length.
2. **Area = 100 square ft; perimeter = 40 ft.** Multiply 10 × 10 for area. Multiply 4 × 10 for perimeter.

CHALLENGE

Area = 169 square cm. Perimeter = 52 cm. Area uses side × side to count square units, while perimeter uses 4 × side to measure the distance around.

Accept equivalent wording and correct unit labels. Area must use square units, and perimeter must use linear units.