

Rectangle Detectives

Use area and perimeter to solve rectangle mysteries.

GRADE 4 • 4.MD.A.3

CCSS.Math.Content.4.MD.A.3 "Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length..."

NAME _____

DATE _____

RECTANGLE RULES

Area tells how many square units cover a rectangle. Multiply length x width to find area, and add all four sides to find perimeter. If you know the area and one side length, divide to find the missing side.

WORKED EXAMPLE

A rectangle is 9 cm long and 4 cm wide. Find its area.

1. Area = length x width.
2. Area = 9×4 .
3. Area = 36 square centimeters.

Answer: 36 square centimeters

PRACTICE 6 problems

- 1** A rectangle is 7 m long and 3 m wide. What is its area?

ANSWER _____

- 2** A rectangle is 8 cm long and 5 cm wide. What is its perimeter?

ANSWER _____

- 3** A rectangle has an area of 30 square inches and a length of 6 inches. What is its width?

ANSWER _____

- 4** A rectangle has a perimeter of 34 feet and a length of 11 feet. What is its width?

ANSWER _____

- 5** A rectangle is 12 yards long and 2 yards wide. What is its area?

ANSWER _____

- 6** A rectangle has a perimeter of 38 cm and a width of 7 cm. What is its length?

ANSWER _____

APPLY IT Show your work

- 1** The game club makes a rectangular banner with an area of 48 square feet. The banner is 8 feet long. How wide is the banner?

WORK SPACE

ANSWER _____

- 2** Maya puts ribbon around the edge of a rectangular photo display. The display is 13 inches long and 6 inches wide. How many inches of ribbon does she need?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A rectangle has an area of 70 square units and a perimeter of 34 units. What are the rectangle's side lengths?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A rectangle is 7 m long and 3 m wide. What is its area?	21 square meters
2	A rectangle is 8 cm long and 5 cm wide. What is its perimeter?	26 centimeters
3	A rectangle has an area of 30 square inches and a length of 6 inches. What is its width?	5 inches
4	A rectangle has a perimeter of 34 feet and a length of 11 feet. What is its width?	6 feet
5	A rectangle is 12 yards long and 2 yards wide. What is its area?	24 square yards
6	A rectangle has a perimeter of 38 cm and a width of 7 cm. What is its length?	12 centimeters

PART 2 • APPLY IT

1. **6 feet** Divide the area by the length. $48 \div 8 = 6$.
2. **38 inches** Find the perimeter by adding twice the length and twice the width. $2 \times 13 + 2 \times 6 = 38$.

CHALLENGE

7 units and 10 units

Accept correct units and equivalent equations. For the challenge, accept the side lengths in either order.