

Math: Area and Perimeter of Rectangles

Area and Perimeter

Both area and perimeter are properties of a rectangle. Area is the amount of space inside the rectangle. Perimeter is the distance around the rectangle.



The area of a rectangle is found by multiplying the length by the width. The perimeter of a rectangle is found by adding all four sides.

Area = length \times width
Perimeter = 2 \times length + 2 \times width

Example: A rectangle has a length of 5 units and a width of 3 units. What is its area and perimeter?

Area = 5 \times 3 = 15 square units
Perimeter = 2 \times 5 + 2 \times 3 = 10 + 6 = 16 units

Example: A rectangle has a perimeter of 20 units and a length of 6 units. What is its width and area?

Perimeter = 2 \times length + 2 \times width
20 = 2 \times 6 + 2 \times width
20 = 12 + 2 \times width
8 = 2 \times width
4 = width

Area = length \times width
Area = 6 \times 4 = 24 square units

Example: A rectangle has an area of 24 square units and a width of 4 units. What is its length and perimeter?

Area = length \times width
24 = length \times 4
6 = length

Perimeter = 2 \times length + 2 \times width
Perimeter = 2 \times 6 + 2 \times 4 = 12 + 8 = 20 units

Example: A rectangle has a perimeter of 18 units and a width of 3 units. What is its length and area?

Perimeter = 2 \times length + 2 \times width
18 = 2 \times length + 2 \times 3
18 = 2 \times length + 6
12 = 2 \times length
6 = length

Area = length \times width
Area = 6 \times 3 = 18 square units

Example: A rectangle has an area of 30 square units and a perimeter of 30 units. What are its length and width?

Area = length \times width
30 = length \times width
Perimeter = 2 \times length + 2 \times width
30 = 2 \times length + 2 \times width