

# Concepts

Perimeter and Area of Squares,  
Rectangles, and Parallelograms

# Perimeter

- **Perimeter is the outside measurement of any flat surface. Add the sides of the figure together.**

Perimeter of a square = side + side + side + side

or  $P = 4 \cdot \text{side}$

$$P = 4s$$

# Finding the perimeter of a square

- Find the perimeter of a postage stamp if one side is 22 mm.

$$P = 4s$$

$$P = 4(22)$$

$$P = 88 \text{ mm}$$

# Finding the unknown side

- If you know the measurement of the perimeter of a figure, you can find the sides of the figure by using the same formula for Perimeter.

$$P = 4s$$

$$\frac{88}{4} = \frac{4s}{4}$$

$$22 = s$$

# Perimeter of a Rectangle

- The formula for finding the perimeter of a rectangle is:

Perimeter = length + length + width + width

$$P = 2(\text{length}) + 2(\text{width})$$

$$P = 2L + 2W$$

# Finding Perimeter of a Rectangle

- Find the perimeter of a rectangle with length of 18 in. and width of 7 in.

$$P = 2L + 2W$$

$$P = 2(18) + 2(7)$$

$$P = 36 + 14$$

$$P = 50 \text{ in.}$$

# Finding Length or Width of a Rectangle

If the perimeter of a rectangle is 45 ft and the width is 9 ft., find the length.

$$P=2L + 2W \text{ (now substitute in what you know)}$$

$$45 = 2L + 2(9) \text{ (now solve for L)}$$

$$45 = 2L + 18$$

$$\begin{array}{r} -18 \\ -18 \end{array}$$

$$27 = 2L$$

$$13.5 \text{ ft.} = L$$

# Area

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- **Area is the amount of surface inside a flat shape.**
  - You are looking for the number of squares of a certain size it takes to fill the area.



# Formulas

## Finding the Area of a Figure

Area of a Rectangle = length • width

$$A = lw$$

Area of a Square = side • side

$$A = s^2$$

Area of a Parallelogram = base • height

$$A = bh$$

Area is always measured in square units.

# Find the area of a rectangle

Find the area of a rectangle that has a length of 12 ft. and a width of 11 ft.

$$A = lw$$

$$A = 12(11)$$

$$A = 132 \text{ ft}^2$$

# Find the area of a parallelogram

Find the area of a parallelogram with a height of 5 in. and a base of 15 in.

$$A = bh$$

$$A = 15(5)$$

$$A = 75 \text{ in}^2$$