PERIMETER

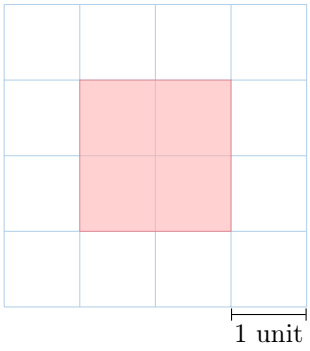
A DEFINITION

Definition Perimeter

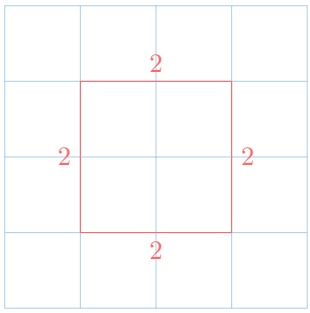
The **perimeter** of a shape is the total length around its outside edge.

To find the perimeter, imagine walking around the shape like it's a park. Count the number of unit lengths along each side as you go.

Ex: Find the perimeter of the red shape:



Answer:



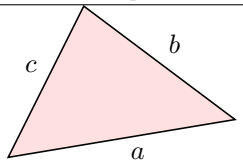
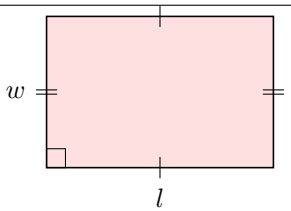
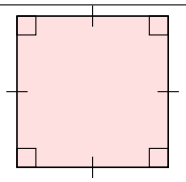
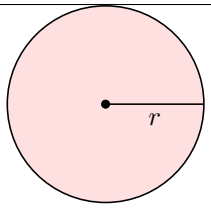
To find the perimeter, we add the length of all 4 sides : $2 + 2 + 2 + 2$.
The perimeter is 8 units.

B PERIMETER OF COMMON SHAPES

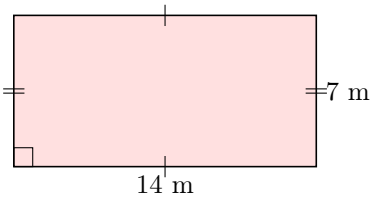
Method Finding a Polygon's Perimeter

To find the perimeter of any polygon (a shape with straight sides), add up the lengths of all its sides.

Proposition **Perimeter Formulas**

Name	Shape	Perimeter
Triangle		$a+b+c$
Rectangle		$l+w+l+w=(2\times l)+(2\times w)$
Square		$s+s+s+s=4\times s$
Circle		$2\times\pi\times r$

Ex: Find the perimeter of the rectangle:



Answer: This is a rectangle with length $L=14$ m and width $l=7$ m. Using the formula for the perimeter of a rectangle:

$$\begin{aligned} P &= (2\times L)+(2\times l) \\ &= (2\times 14)+(2\times 7) \\ &= 28+14 \\ &= 42\,\text{m} \end{aligned}$$

So, the perimeter is 42 meters.

C PERIMETER OF COMPOSITE FIGURES

Definition **Composite Figure**

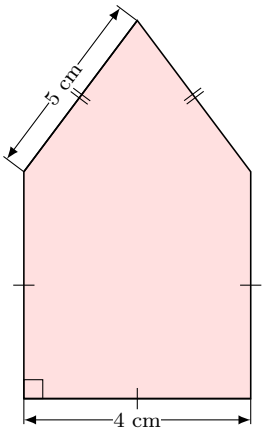
A **composite figure** is a shape made up of two or more simple shapes, like triangles, rectangles, or squares, combined together.

Method **Finding the Perimeter of a Composite Figure**

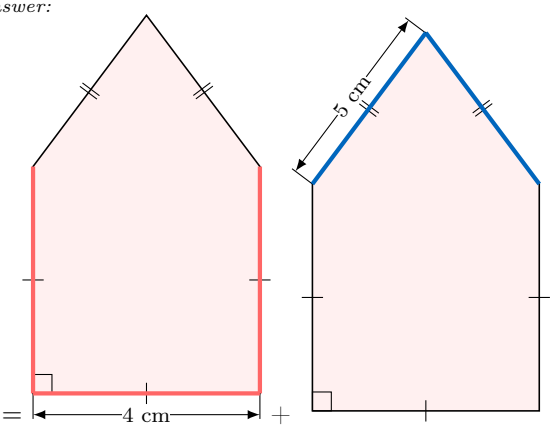
To find the perimeter of a composite figure:

1. Identify all the outer sides of the shape.
2. Add the lengths of these outer sides together to find the total perimeter.

Ex: Find the perimeter of the composite figure:



Answer:



$P =$ +

$P = 3 \times 4 \text{ cm} + 2 \times 5 \text{ cm}$

$P = 22 \text{ cm}$