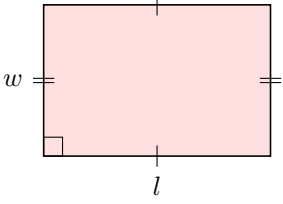
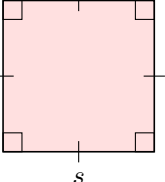


# AREA FORMULAS

## A AREA OF A RECTANGLE OR A SQUARE

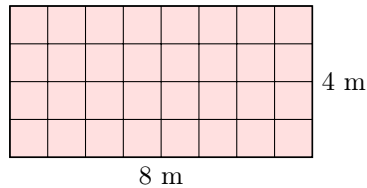
### Proposition Area Formulas

Name	Shape	Area
Rectangle		$l \times w$
Square		$s \times s$

### Method Finding a Shape's Area

To find the area of a rectangle or a square, multiply its length by its width.

**Ex:** Find the area of the rectangle:



*Answer:* This is a rectangle with length  $L = 8$  m and width  $l = 4$  m. Using the formula for the area of a rectangle:

$$\begin{aligned}
 A &= L \times l \\
 &= 8 \times 4 \\
 &= 32 \text{ m}^2
 \end{aligned}$$

So, the area is 32 square meters.

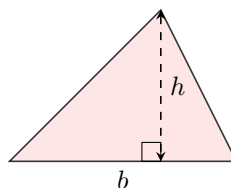
## B AREA OF A TRIANGLE

### Proposition Area of a Triangle

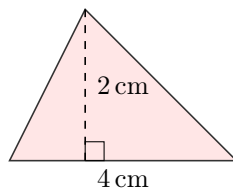
The area of a triangle is found by multiplying the base by the height and dividing by 2:

$$\text{Area of a triangle} = \frac{\text{base} \times \text{height}}{2}$$

$$A = \frac{b \times h}{2}$$



**Ex:** Find the area of the triangle:



Answer:

$$\begin{aligned} A &= \frac{b \times h}{2} \\ &= \frac{4 \times 2}{2} \\ &= 4 \text{ cm}^2 \end{aligned}$$

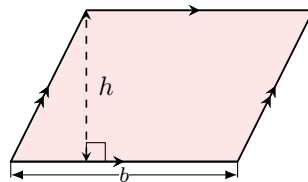
## C AREA OF A PARALLELOGRAM

### Proposition Area of a Parallelogram

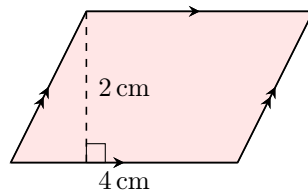
The area of a parallelogram is found by multiplying the base by the height:

Area of a parallelogram = base  $\times$  height

$$A = b \times h$$



**Ex:** Find the area of the parallelogram:



Answer:

$$\begin{aligned} A &= b \times h \\ &= 4 \times 2 \\ &= 8 \text{ cm}^2 \end{aligned}$$

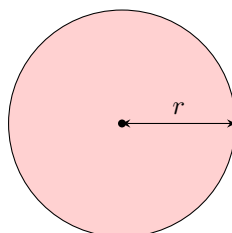
## D AREA OF A CIRCLE

### Proposition Area of a Circle

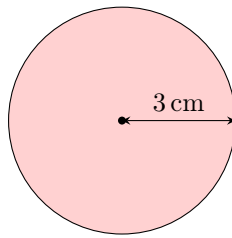
The area of a circle is found by multiplying pi by the radius squared:

Area of a circle =  $\pi \times \text{radius} \times \text{radius}$

$$A = \pi r \times r$$



**Ex:** Find the area of the circle:

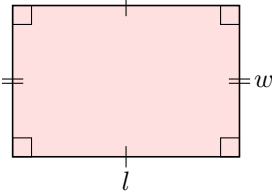
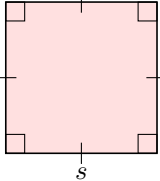
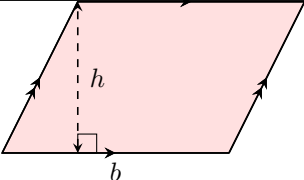
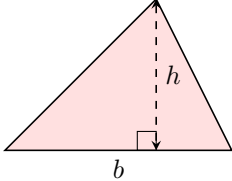
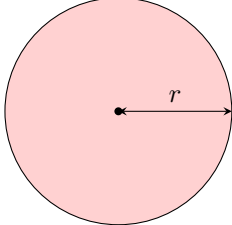


Answer:

$$\begin{aligned} A &= \pi \times r \times r \\ &= \pi \times 3 \times 3 \\ &\approx 28.3 \text{ cm}^2 \end{aligned}$$

## E AREA FORMULAS

### Proposition Area Formulas

Name	Shape	Area
Rectangle		$A = l \times w$
Square		$A = s \times s$ $= s^2$
Parallelogram		$A = b \times h$
Triangle		$A = \frac{b \times h}{2}$
Circle		$A = \pi \times r \times r$ $= \pi r^2$

## F AREA OF COMPOSITE FIGURES

### Definition Composite Figure

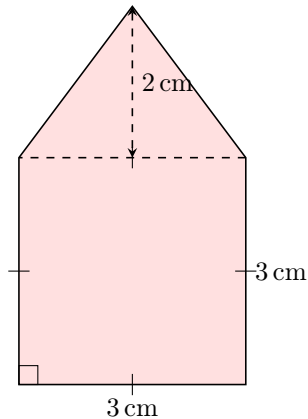
A **composite figure** is made up of two or more simple geometric shapes, like rectangles, triangles, or circles, combined together.

### Method Finding the Area of a Composite Figure

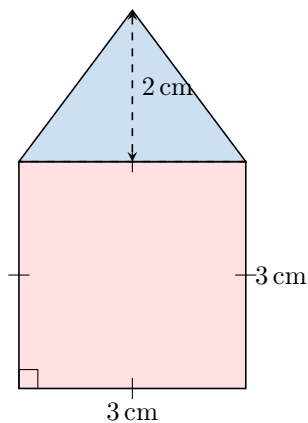
To find the area of a composite figure, follow these steps:

1. Divide the figure into simple, non-overlapping shapes, such as rectangles, triangles, or circles.
2. Find the area of each simpler shape using the appropriate formula.
3. Add the areas together to find the total area of the composite figure.

**Ex:** Find the area of the composite figure below, which is made up of a square and a triangle:



*Answer:*



$$\begin{aligned} A &= \text{Area of square} + \text{Area of triangle} \\ &= s \times s + \frac{b \times h}{2} \\ &= 3 \times 3 + \frac{3 \times 2}{2} \\ &= 9 + 3 \\ &= 12 \text{ cm}^2 \end{aligned}$$