Area of a rectangle

Area of a Rectangle

Area is the amount of space a rectangle covers on a flat surface.

It is measured in square units (e.g., cm^2, m^2, km^2).

The formula for the area of a rectangle is:

Formula:

Area = Length × Breadth

Where:

- **Length (L)** is the longer side of the rectangle.
- **Breadth (B)** is the shorter side of the rectangle

Example Calculations

Example 1:

Find the area of a rectangle with length = 15 cm and breadth = 4 cm.

Solution:

Area = Length × Breadth

= 15 × 4

= 60 cm^2

Example 2:

A rectangle has an area of 72 cm^2 and a length of 9 cm. Find its breadth.

Solution:

Area = Length × Breadth

72 = 9 × Breadth

Breadth = 72 ÷ 9 = 8 cm

Example 3:

Convert the area of a rectangle of size 5 m × 3 m into cm^2.

Solution:

Area = 5 × 3 = 15 m^2

Since 1 m^2 = 10,000 cm^2,

15 m^2 = 15 × 10,000 = 150,000 cm^2

Properties of Area of a Rectangle

i. The area of a rectangle is always positive as it represents physical space.

ii. If the length or breadth increases, the area increases.

iii. Doubling both the length and breadth makes the area four times larger.

iv. The unit of area is always in square units (e.g., cm^2, m^2, km^2).

v. If a rectangle is divided into two smaller rectangles, the total area is the sum of their areas.