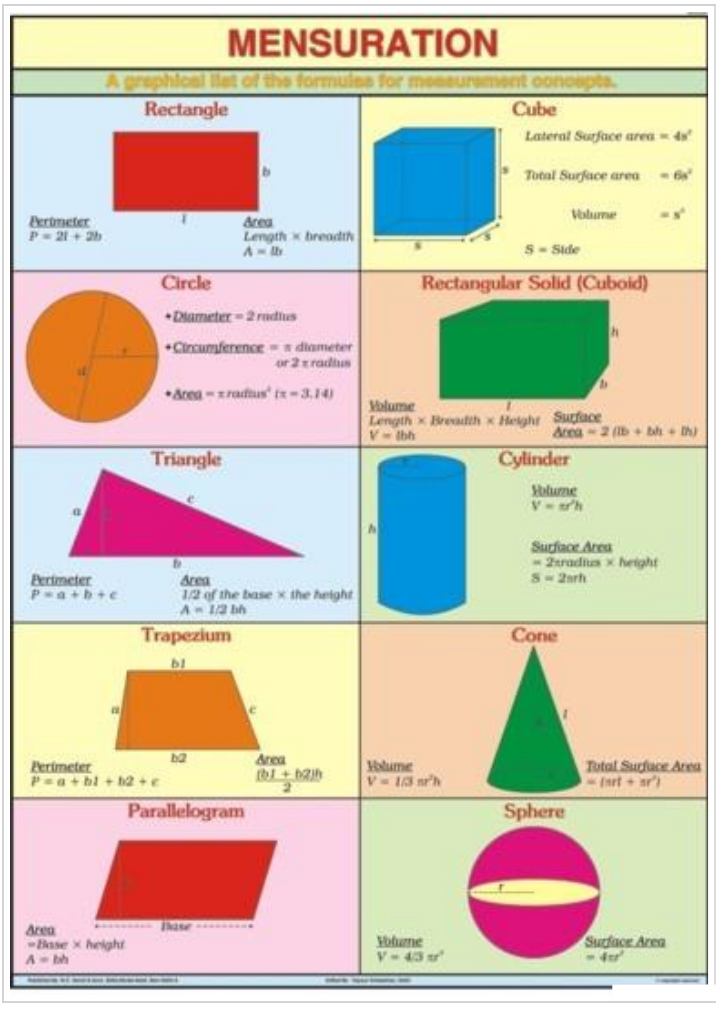
Mensuration

Closed figure:A figure with **no open ends** is a closed figure.
Regular closed figures: A closed figure in which **all the sides** and **angles equal.**



Perimeter:

Perimeter is the distance covered along the boundary forming a closed figure when we go round the figure once. The concept of perimeter is widely used in real life.
Eg: 1) For fencing land.
2) For building a compound wall around a house.

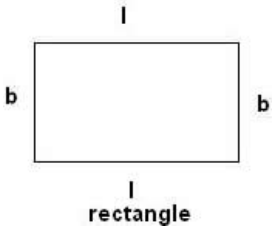
The perimeter of a regular closed figure is equal to the sum of its sides.

Perimeter of a rectangle:

$= Length(l) + Breadth(b)$

$+Length(l) + Breadth\ (b)$

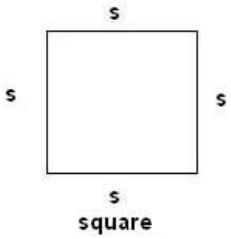
$= 2(l + b)$



Perimeter of a square:

$= s + s + s + s$

$= 4 \times s$

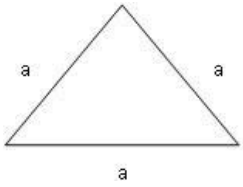


Equilateral triangle:

A triangle with **all its sides and angles equal** is called an equilateral triangle.

The perimeter of an equilateral triangle with the side 'a' $= a + a + a$

$= 3 \times a$

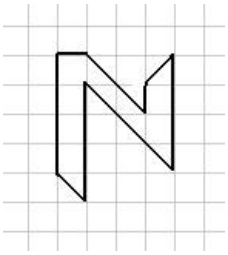


Area

The **amount of surface** enclosed by **a closed figure** is called its **area**.
The following conventions are to be adopted while calculating the area of a closed figure using a squared or graph paper.

- Count the **fully-filled squares** covered by the closed figure as **one square unit** or unit square each.
- Count the **half-filled squares** as **half a square unit**.
- Count the squares that are **more than half-filled**as **one square unit**.
- Ignore the squares filled less than half.

For example, the area of this shape can be calculated as shown:



Covered area	Number	Area estimate (sq. units)
Fully filled squares	6	6
Half–filled squares	7	7 x ½
Squares filled more than half	0	0
Squares filled less than half	0	0

Area covered by full squares = 6 x 1 = 6 sq. units
Area covered by half squares = 7 x ½ = 7/2= 3 ½ sq. units
Total area of the given shape = 6 + 3 ½ sq. units
Thus, the total area of the given shape = 9 ½ sq. Units

Area of a rectangle can be obtained by multiplying length by breadth. Area of the square can be obtained by multiplying side by side.