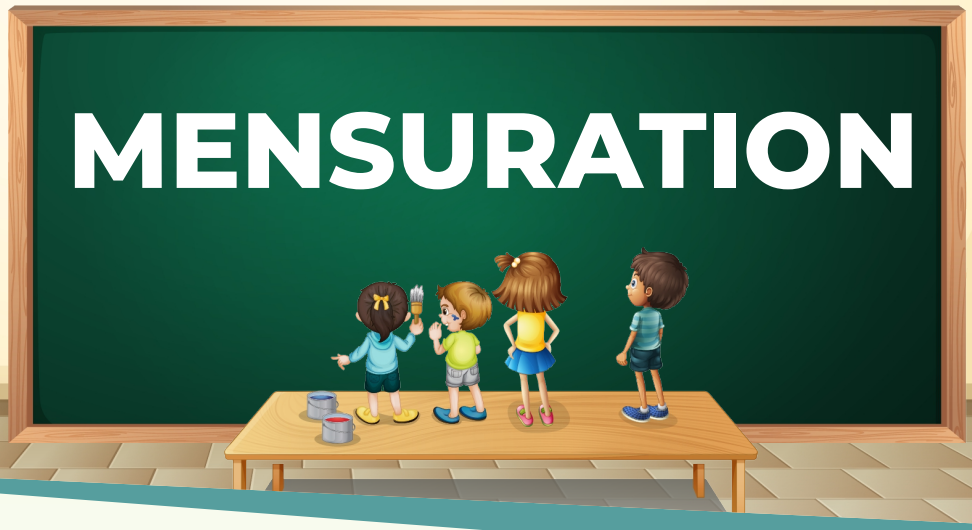
ALLEN®

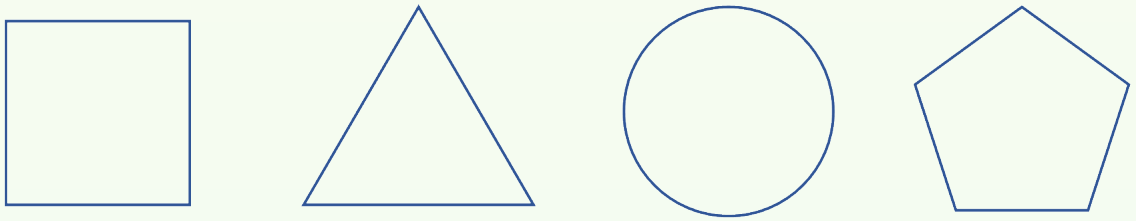
MENSURATION



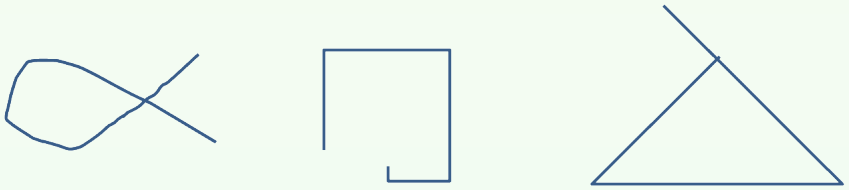
KEY POINTS

Mensuration deals with the measurement of length, area or volume of various geometrical shapes.

Closed figures

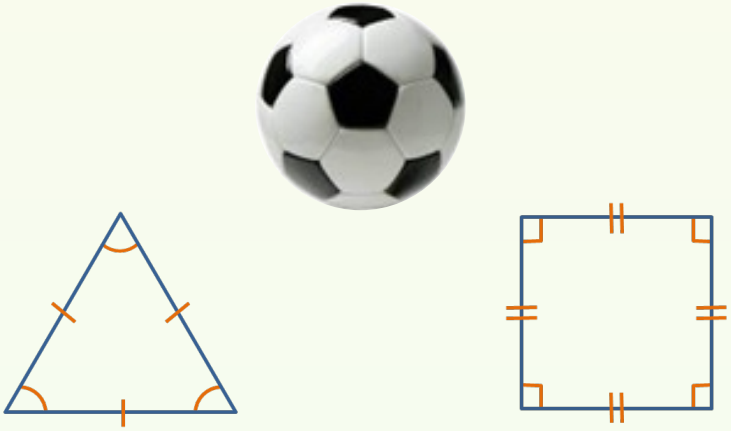


Open figures



Polygon : A closed figure made up of only line segments is called a polygon.

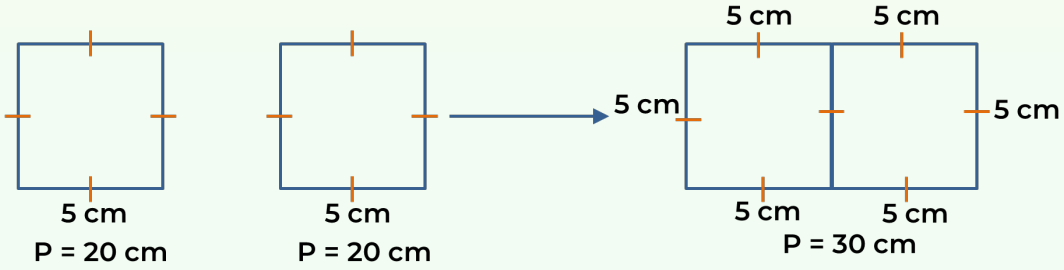
Regular polygon : A polygon having all sides and all internal angles equal is called a regular polygon.



Regular Polygon

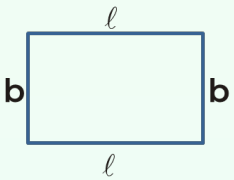
Perimeter of figures

This length of the wall along the boundary is called the perimeter of the field.



Perimeter of a rectangle

The perimeter of a rectangle is the sum of all its sides.

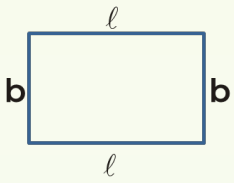


Perimeter = $2(\ell + b)$ units

where ℓ = length, b = breadth

Perimeter of a square

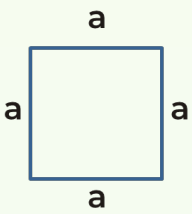
The perimeter of a rectangle is the sum of all its sides.



Perimeter = $2(\ell + b)$ units

where ℓ = length, b = breadth

Perimeter of a square

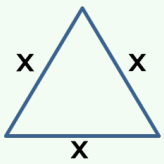


Perimeter of a square = 4a units

= 4 times the side $\Rightarrow$ So, perimeter of a square = 4 × side

The perimeter of a square is equal to four times the length of the side.

Perimeter of an equilateral triangle



A triangle with all sides are equal is called an equilateral triangle.

perimeter =side + side + side = x + x + x = 3x units

Perimeter of a regular polygon

Let one side of a regular polygon be 'a' units.

Perimeter of a regular pentagon = 5a units

Perimeter of a regular hexagon = 6a units

Perimeter of a regular octagon = 8a units

To find the cost of fencing

Cost of fencing = Perimeter × Cost per unit

Area of figures

The amount of surface of the plane covered by a closed figure is called its area.

(i) Area of a rectangle = Length × Breadth

(ii) Area of a square = side × side

(iii) Length of a rectangle = $\frac{\text{Area}}{\text{Breadth}}$

(iv) Breadth of a rectangle = $\frac{\text{Area}}{\text{Length}}$