

# Mensuration

1. The size of a line segment is its length.
2. Various units of measurement are connected by the following relations:  
1 kilometre = 1000 metre (m)  
1 metre = 100 centimetre (cm)  
1 decimetre = 10 centimetre (cm)  
1 metre = 10 decimetre (dm)  
1 centimetre = 10 millimetre (mm)  
1 foot = 12 inches  
1 yard = 3 feet  
22 yards = 1 chain
3. A closed plane figure together with its interior is called the region enclosed by it.
4. The sum of lengths of all sides of a plane figure or the length of its boundary is called the 'perimeter' of the figure.
5. The measurement of the region enclosed by a closed plane figure is called the 'area' of the plane figure.
6. A square centimetre is the area of the region formed by a square of side 1 cm.
7. Standard units of area and their relations are:  
 $100 \text{ mm}^2 = 1 \text{ cm}^2$   
 $100 \text{ cm}^2 = 1 \text{ dm}^2$   
 $100 \text{ dm}^2 = 1 \text{ m}^2$   
 $10000 \text{ cm}^2 = 1 \text{ m}^2$   
 $100 \text{ m}^2 = 1 \text{ are}$   
100 ares = 1 hectare  
100 hectares = 1 sq. km.
8. Perimeter of a rectangle = 2 (Length + Breadth) or,  $P = 2(l + b)$   
Perimeter of a square = 4x (Side) or,  $P = 4l$   
Area of a rectangle = Length x Breadth or,  $A = l \times b$  Area A  
Also, length of a rectangle  $\frac{\text{Area}}{\text{Breadth}}$  or,  $l = \frac{A}{b}$   
Breadth of a rectangle  $\frac{\text{Area}}{\text{Length}}$  or,  $b = \frac{A}{l}$ , Area of a square = (Side)<sup>2</sup> or,  $A = l \times l$ .