Chapter –11

Perimeter and Area

- **Perimeter** is the distance around a closed figure whereas area is the part of plane occupied by the closed figure.
- **Area** is the measure of the part of plane or region enclosed by it.
- We have learnt how to find perimeter and area of a square and rectangle in the earlier class. They are:

  (a) Perimeter of a square = 4 × side

  (b) Perimeter of a rectangle = 2 × (length + breadth)

  (c) Area of a square = side × side

  (d) Area of a rectangle = length × breadth
- Area of a parallelogram = base × height
- Area of a triangle = $\frac{1}{2}$ (area of the parallelogram generated from it) = $\frac{1}{2} \times base \times height$
- Area of equilateral triangle = $\frac{\sqrt{3}}{4} \times (side)^2$
- The distance around a circular region is known as its circumference.
- The ratio of circumference and diameter of a circle is a constant is denoted by π (pi).
- Circumference of a circle = πd, where d is the diameter of a circle and $\pi = \frac{\pi}{7}$ *or 3.14* (approximately).
- Area of a circle = πr^2, where r is the radius of the circle.
- Based on the conversion of units for lengths, studied earlier, the units of areas can also be converted: $1\ cm^2 = 100\ mm^2$

  $1\ m^2 = 10000\ cm^2$,

  $1\ hectare = 10000\ m^2$