

MENSURATION

1. Rectangle:

(a) Area of a rectangle = length $\times$ breadth

(b) Perimeter of a rectangle
= $2(\text{length} + \text{breadth})$

(c) Diagonal of a rectangle

$$= \sqrt{(\text{length})^2 + (\text{Breadth})^2}$$

2. Square:

(a) Area of a square = $(\text{side})^2$

(b) Perimeter of a square = $4 \times \text{side}$

(c) Diagonal of a square = $\sqrt{2} \times \text{side}$

3. Circle:

(a) Area of a circle = $\pi \times (\text{radius})^2$

(b) Circumference of a circle = $2\pi \times (\text{radius})$

(c) Radius = $\frac{\text{Diameter}}{2}$ or
Diameter = $2 \times \text{Radius}$

4. Triangle:

(a) Area of a triangle = $\sqrt{s(s-a)(s-b)(s-c)}$

where $s = \frac{a+b+c}{2}$

(b) Area of a right angled triangle

$= \frac{1}{2} \times \text{base (b)} \times \text{height (h)}$

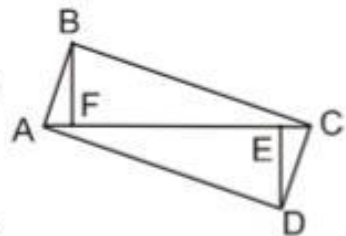
(c) Area of an equilateral triangle

$= \frac{\sqrt{3}}{4} \times (\text{side})^2$

5. Quadrilateral:

(a) Area of a quadrilateral = $\frac{1}{2} \times \text{diagonal} \times$
sum of the offsets

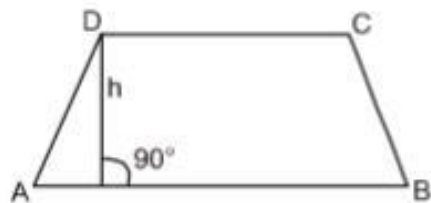
Here AC = diagonal, BF
and DE are offsets



(b) Area of a parallelogram =

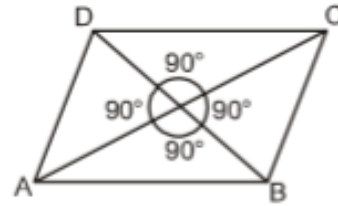
Length of a side $\times$ corresponding altitude

Here AB = a side of the
parallelogram ABCD
and h = corresponding
altitude



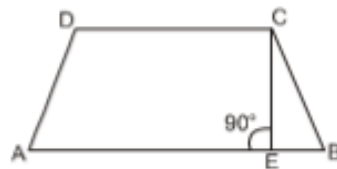
(c) Area of a rhombus = $\frac{1}{2} \times$ product of the diagonals

Here AC, BD = diagonals
and AB = BC = CD = DA



(d) Area of a trapezium

= $\frac{1}{2} \times$ (sum of the parallel sides) $\times$
distance between them



Here AB, CD = parallel sides, CE =
distance between the parallel sides.

6. Four Walls:

(a) Area of the four walls (A) = $2 \times h(l + b)$

(b) Height of the room (h) = $\frac{A}{2(l + b)}$

where h = height of the room
 b = breadth of the room
 l = length of the room
A = area of the four walls
