

Square

Square has 4 sides. All Sides are equal.

Perimeter (परिमाण) of Square $4a = 4 \times \text{one side}$

Area of Square = $A^2 = \text{Side}^2$

Diagonal (विकर्ण) = $\sqrt{2} \times \text{side}$

Rectangle

Rectangle has 2 length and 2 breath

Perimeter (परिमाण) of rectangle = $2 (\text{Length} + \text{Breath})$

Area of rectangle = $\text{Length} \times \text{Breath}$

Diagonal (विकर्ण) = $\sqrt{\text{length}^2 + \text{Breath}^2}$

Right Angle Triangle

Area of Triangle = $\frac{1}{2} \times \text{base} \times \text{height}$

Perimeter (परिमाण) of Triangle = $\text{Perpendicular} + \text{Base} + \text{Hypotenuse}$

$\text{Perpendicular}^2 + \text{Base}^2 = \text{Hypotenuse}^2$

Equilateral Triangle

All sides are equal

Perimeter (परिमाण) of triangle = $3 \times \text{Side}$

Area of triangle = $\frac{\sqrt{3}}{4} \times \text{Side}^2$

Height of Triangle = $\frac{\sqrt{3}}{2} \times \text{Side}$

Isosceles Triangle

Any of 2 sides are equal and their angles are also equal.

Area of Triangle = $\frac{1}{2} \times \text{Base} \times \text{Height}$

Area of Triangle = $b \sqrt{4\text{side}^2 - b^2} / 4$

Rhombus

All sides are equal but not angles.

Diagonals intersect each other and make an angle of 90° .

Perimeter (परिमाप) of Rhombus = $4 \times \text{side}$

Area of Rhombus = $\frac{1}{2} \times d_1 \times d_2$

Parallelogram

Area of parallelogram = Base x Height

Cube

6 faces, 12 Edges and 8 vertices All sides are equal.

Diagonal (विकर्ण) = $\sqrt{3} \times \text{Side}$

CSA (वक्रपृष्ठ) of Cube = 6side^2

Volume (आयतन) of Cube = side^3

Cuboid

Opposite sides are equal.

Diagonal (विकर्ण) = $\sqrt{\text{length}^2 + \text{breath}^2 + \text{height}^2}$

CSA (वक्रपृष्ठ) of cuboid = $2(lb+bh+hl)$

Volume (आयतन) of cuboid = length x breath x height (lbh)

Cylinder

CSA (वक्रपृष्ठ) of cylinder = $2 \times \pi \text{ radius} \times \text{height} (2\pi rh)$

TSA (संपूर्ण पृष्ठ) of Cylinder = $2 \pi r (\text{height} + \text{radius}) (2\pi r (h+r))$

Volume (आयतन) of cylinder = $\pi \text{ radius}^2 \times \text{height} (\pi r^2 h)$

Cone

CSA (वक्रपृष्ठ) of cone = $\pi \times \text{radius} \times \text{slant height} (\pi rl)$

TSA (संपूर्ण पृष्ठ) of cone = $\pi \times \text{radius} (\text{slant height} \times \text{radius}) \pi r (l+s)$

Volume of (आयतन) cone = $\frac{1}{3} \pi \times \text{radius}^2 \times \text{height} (\frac{1}{3} \pi r^2 h)$

Sphere

CSA/TSA of Sphere= $4 \pi \times \text{radius}^2$ ($4\pi r^2$)

Volume (आयतन) of Sphere= $\frac{4}{3} \pi \times \text{radius}^3$ ($\frac{4}{3} \pi r^3$)

Hemisphere

CSA (वक्रपृष्ठ) of Hemisphere= $2\pi \times \text{radius}^2$ ($2\pi r^2$)

TSA (संपूर्ण पृष्ठ) of Hemisphere= $3\pi \times \text{radius}^2$ ($3\pi r^2$)

Volume (आयतन) of Hemisphere= $\frac{2}{3} \pi \times \text{radius}^3$ ($\frac{2}{3} \pi r^3$)

Tetrahedron

Height= $\frac{\sqrt{2}}{\sqrt{3}} \times \text{side}$

LSA/CSA (वक्रपृष्ठ) of Tetrahedron= $3 \times \frac{\sqrt{3}}{4} \times \text{side}^2$

TSA (संपूर्ण पृष्ठ) of Tetrahedron= $\sqrt{3} \times \text{side}^2$

Volume (आयतन) of Tetrahedron= $\frac{\text{side}^3}{6\sqrt{2}}$

