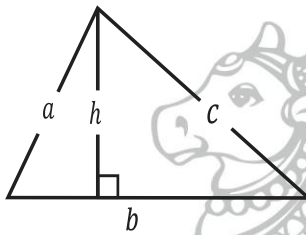


1. TRIANGLE



Base = b

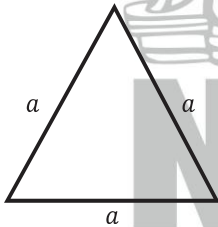
Height = h

$$\text{Area} = \frac{1}{2} b h$$

When, $S = \frac{a+b+c}{2}$

$$\text{Area} = \sqrt{S(S-a)(S-b)(S-c)}$$

2. EQUILATERAL TRIANGLE



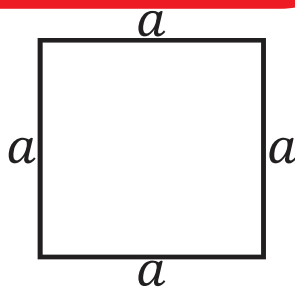
Side = a

$$\text{Area} = \frac{\sqrt{3}}{4} a^2$$

Height or Altitude (h) = $\frac{\sqrt{3}}{2} a$

$$\text{Perimeter} = 3a$$

3. SQUARE



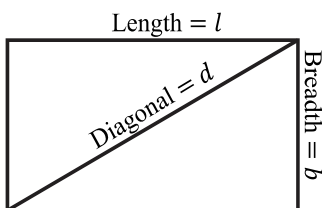
Side = a

Diagonal = d

$$\text{Area} = a^2 = \frac{d^2}{2}$$

$$d = a\sqrt{2}$$

4. RECTANGLE



Length = l

Length = l

Breadth = b

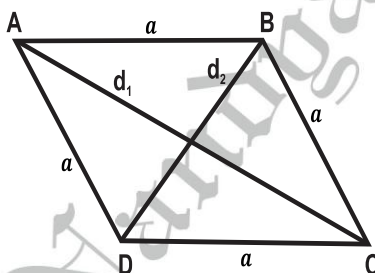
Diagonal = d

$$\text{Area} = lb$$

$$\text{Perimeter} = 2(l + b)$$

$$d = \sqrt{l^2 + b^2}$$

5. RHOMBUS



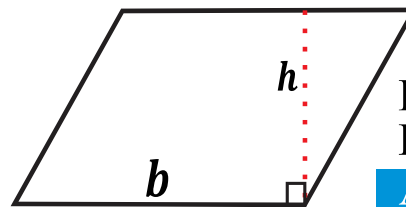
Side = a

Diagonals = d_1, d_2

$$\text{Area} = \frac{1}{2} d_1 d_2$$

$$\text{Perimeter} = 4a$$

6. PARALLELOGRAM

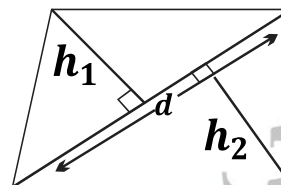


Base = b

Height = h

$$\text{Area} = bh$$

7. QUADRILATERAL

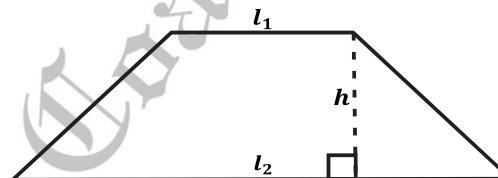


Diagonal = d

h_1, h_2 = Perpendicular distance from opposite vertex

$$\text{Area} = \frac{1}{2} d(h_1 + h_2)$$

8. TRAPEZIUM

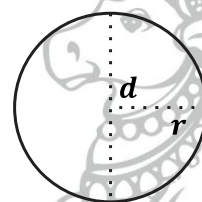


Height = h

l_1, l_2 = length of two parallel sides

$$\text{Area} = \frac{1}{2} h(l_1 + l_2)$$

9. CIRCLE



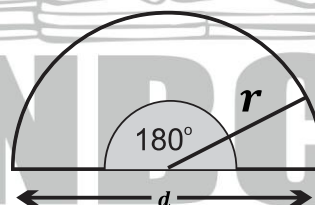
Radius = r

Diameter = d

$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r = \pi d$$

10. SEMICIRCLE



Radius = r

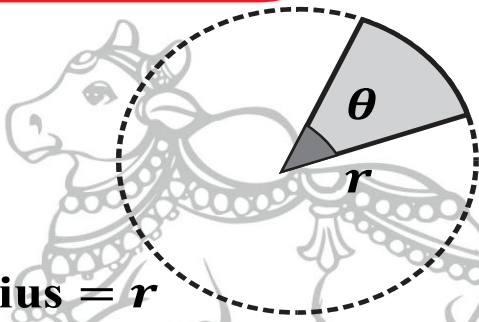
Diameter = d

$$d = 2r$$

$$\text{Area} = \frac{\pi r^2}{2}$$

$$\text{Circumference} = \pi r + 2r = \frac{36}{7} r$$

11. SECTOR



Radius = r

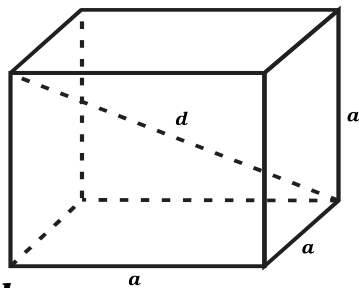
Angle between radii = θ

$$\text{Area} = \frac{\theta}{360} \pi r^2$$

When, l = length of the arc

$$\text{Area} = \frac{lr}{2}$$

12. CUBE



Side = a

Diagonal = d

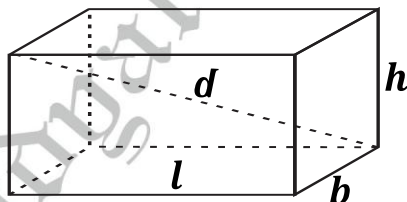
$$\text{Lateral Surface Area (LSA)} = 4a^2$$

$$\text{Total Surface Area (TSA)} = 6a^2$$

$$\text{Volume} = a^3$$

$$\text{Diagonal} = a\sqrt{3}$$

13. CUBOID (or) RECTANGULAR SOLID



Length = l

Breadth = b

Height = h

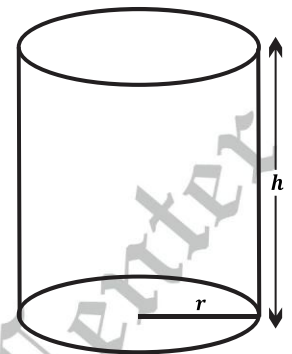
$$\text{Lateral Surface Area (LSA)} = 2h(l + b)$$

$$\text{Total Surface Area (TSA)} = 2(lb + bh + lh)$$

$$\text{Volume} = lbh$$

$$\text{Diagonal} = \sqrt{l^2 + b^2 + h^2}$$

14. CYLINDER



Radius = r

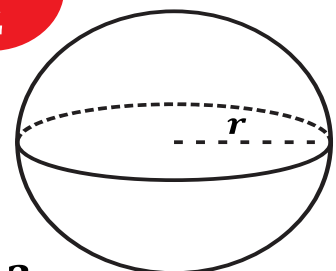
Height = h

$$\text{Lateral Surface Area (LSA)} \\ \text{(or) Curved Surface Area} = 2\pi rh$$

$$\text{Total Surface Area (TSA)} = 2\pi r(r + h)$$

$$\text{Volume} = \pi r^2 h$$

15. SPHERE



Radius = r

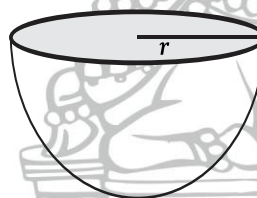
Diameter = $d = 2r$

$$\text{Lateral Surface Area (LSA)} \\ \text{(or) Curved Surface Area} = 4\pi r^2$$

$$\text{Total Surface Area (TSA)} = 4\pi r^2$$

$$\text{Volume} = \frac{4}{3} \pi r^3$$

16. HEMI SPHERE



Radius = r

Diameter = $d = 2r$

$$\text{Lateral Surface Area (LSA) (or)} \\ \text{Curved Surface Area} = 2\pi r^2$$

$$\text{Total Surface Area (TSA)} = 3\pi r^2$$

$$\text{Volume} = \frac{2}{3} \pi r^3$$

17. CONE

Height = h

Base Radius = r

Slant Height = s ($s^2 = r^2 + h^2$)

$$\text{Lateral Surface Area (LSA) (or)} \\ \text{Curved Surface Area} = \pi rs$$

$$\text{Total Surface Area (TSA)} = \pi r(s + r)$$

$$\text{Volume} = \frac{1}{3} \pi r^2 h$$

