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Mensuration Formulas :-

Mensuration Formulas For 2D Shapes :-

Shapes	Perimeter (units)	Area (Square units)
Right Triangle	Sum of all sides	$\frac{1}{2}$×b×h
Equilateral Triangle	3a	$\frac{\sqrt{3}}{4}a^2$
Scalene Triangle (Heron's Formula)	a+b+c	$\sqrt{s(s-a)(s-b)(s-c)}$ Where S= $\frac{a+b+c}{2}$
Square	4a	a^2
Rectangle	2(l+b)	l × b
Parallelogram	2(l+b)	b × h
Rhombus	4a	½ × d_1 × d_2

Trapezium	a+b+c+d	½ (sum of parallel sides)h
Circle	2 π r	πr^2

Mensuration Formulas for 3D Shapes :-

	Curved Surface Area (CSA) or Lateral Surface Area (LSA) (Square units)	Total Surface Area (TSA) (Square units)	Volume (Cubic units)
Cube	$\mathbf{4a^2}$	$\mathbf{6\ a^2}$	$\mathbf{a^3}$
Cuboid	2(l+b)h	2(lb+bh+hl)	**l × b × h**
Cylinder	2π r h	2π r (h+r)	π r ^{2} h
Cone	**π r l**	**πr (r + l)**	**(⅓) π r^2 h**
Sphere	**4 π r^2**	**4 π r^2**	$\mathbf{(\frac{4}{3})\ \pi\ r^3}$

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Hemisphere	**2 π r ^{2}**	**3 π r ^{2}**	**$(\frac{2}{3})$ π r^3**

frustum	**π l(r_1 + r_2)**	$\boldsymbol{\pi l(r_1 + r_2) + \pi({r_1}^2 + {r_2}^2)}$	$\frac{1}{3}\pi h({r_1}^2 + {r_2}^2 + r_1 r_2)$

NOTE :- Slant Height of Cone (l) l = $\sqrt{\boldsymbol{h^2 + r^2}}$

Slant Height of Frustum l = $\sqrt{h^2 + {r_1}^2 - {r_2}^2}$