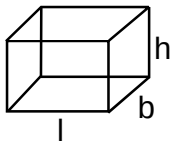
Surface Area and Volume

SURFACE AREA AND VOLUME

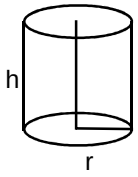
Cuboid

Length of diagonal = $\sqrt{l^2 + b^2 + h^2}$



T.S.A = 2(lb +bh + hl)
C.S.A = 2h(l + b)
Volume = l × b × h

Cylinder



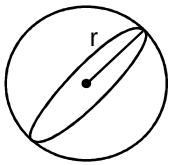
C.S.A = $2\pi rh$

T.S.A = $2\pi rh + 2\pi r^2$

$= 2\pi r(r + h)$

Volume = $\pi r^2 h$

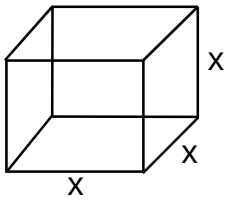
Sphere



T.S.A = C.S.A = $4\pi r^2$

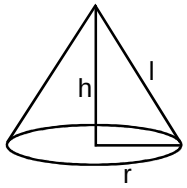
Volume $= \frac{4}{3}\pi r^3$

Cube



T.S.A = $2(x^2 + x^2 + x^2) = 6x^2$
C.S.A = $4x^2$
Volume = x^3
Length of diagonal = $x\sqrt{3}$

Cone



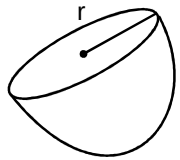
C.S.A = πrl

T.S.A = $\pi rl + \pi r^2$
$= \pi r(l + r)$

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

$l = \sqrt{h^2 + r^2}$ (Slant height)

Hemi - Sphere

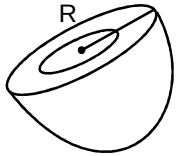


C.S.A = $2\pi r^2$

T.S.A = $2\pi r^2 + \pi r^2 = 3\pi r^2$

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

Hollow hemi-sprere



C.S.A = $2\pi(R^2 + r^2)$
T.S.A = $2\pi(R^2 + r^2)$
$+ \pi(R^2 - r^2)$

Volume $= \frac{2}{3}\pi(R^3 - r^3)$