

Surface Area and Volume

Cuboid l, b, h

$$\text{TSA} = 2(lb + bh + hl), \quad \text{LSA} = 2h(l + b), \quad V = lbh$$

Cube, edge a

$$\text{TSA} = 6a^2, \quad V = a^3$$

Cylinder

$$\text{CSA} = 2\pi rh, \quad \text{TSA} = 2\pi r(r + h), \quad V = \pi r^2 h$$

Cone, $l = \sqrt{r^2 + h^2}$

$$\text{CSA} = \pi rl, \quad \text{TSA} = \pi r(l + r), \quad V = \frac{1}{3}\pi r^2 h$$

Sphere

$$\text{SA} = 4\pi r^2, \quad V = \frac{4}{3}\pi r^3$$

Hemisphere

$$\text{CSA} = 2\pi r^2, \quad \text{TSA} = 3\pi r^2, \quad V = \frac{2}{3}\pi r^3$$