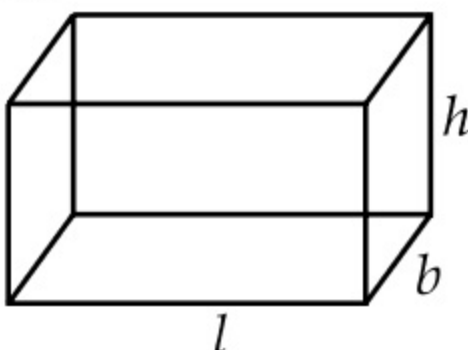
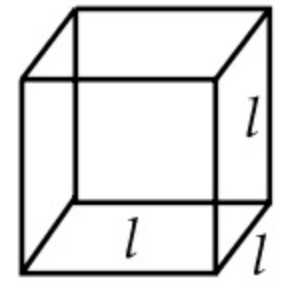
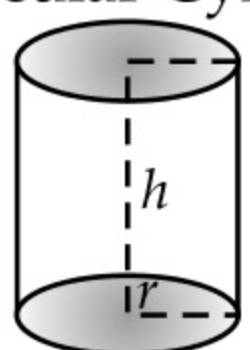
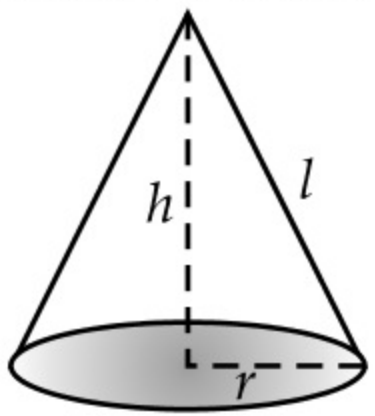
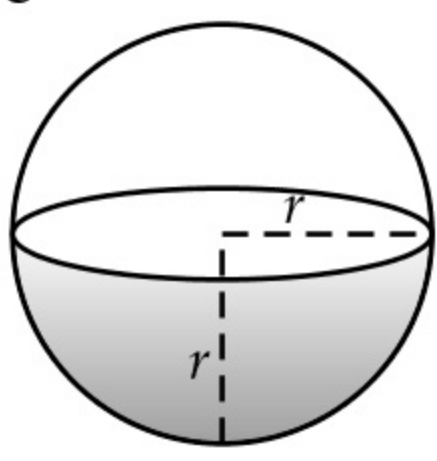
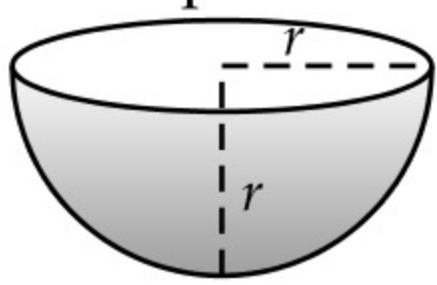


CHAPTER 13 : Surface Areas and Volumes

S. No.	Object	CSA	TSA	Volume	Nomenclature
1.	Cuboid 	Area of four walls $2(bh + hl)$ $= 2(l + b) \times h$	$2(lb + bh + hl)$	lbh	$l = \text{length}$ $b = \text{breadth}$ $h = \text{height}$
2.	Cube 	Area of four walls $= 4l^2$	$6l^2$	l^3	$l = \text{length}$
3.	Right Circular Cylinder 	$2\pi rh$	$2\pi r(r + h)$	$\pi r^2 h$	$r = \text{radius of base}$ $h = \text{height}$
4.	Right Circular Cone 	πrl	$\pi r(r + l)$	$\frac{1}{3}(\pi r^2 h)$	$r = \text{radius of base}$ $h = \text{height}$ $l = \text{slant height}$ $l = \sqrt{r^2 + h^2}$
5.	Sphere 	$4\pi r^2$	$4\pi r^2$	$\frac{4}{3}(\pi r^3)$	$r = \text{radius}$
6.	Solid Hemisphere 	$2\pi r^2$	$3\pi r^2$	$\frac{2}{3}(\pi r^3)$	$r = \text{radius}$

Tips (Useful Conversion)

$$\text{Area} \times \text{Rate} = \text{Cost}$$

$$\text{Density} = \text{Mass/Volume}$$

$$1 \text{ m}^3 = 1000 \text{ L}$$

$$1 \text{ m}^3 = 1 \text{ kL}$$

$$1 \text{ L} = 1000 \text{ cm}^3$$

$$\text{Speed} = \text{Distance/Time}$$

$$1 \text{ km} = 1000 \text{ m} = 10^5 \text{ cm}$$

$$1 \text{ km}^2 = 10^6 \text{ m}^2$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ m}^2 = 10000 \text{ cm}^2$$

$$1 \text{ km/hr} = \frac{5}{18} \text{ m/sec}$$

$$1 \text{ km/hr} = \frac{50}{3} \text{ m/min}$$

Shape of the river = cuboid