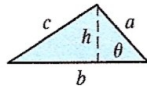


B.2 Formulas from Geometry

Triangle

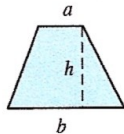
$$h = a \sin \theta$$

$$\text{Area} = \frac{1}{2}bh$$



Trapezoid

$$\text{Area} = \frac{h}{2}(a + b)$$



Circle

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

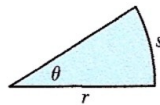
$$\text{Circumference} = 2\pi r$$



Sector of Circle

$$\text{Area} = \frac{\theta r^2}{2} \quad (\theta \text{ in radians})$$

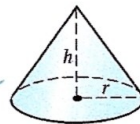
$$s = r\theta \quad (\theta \text{ in radians})$$



Right Circular Cone

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

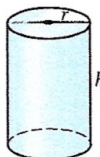
$$\text{Lateral surface area} = \pi r \sqrt{r^2 + h^2}$$



Right Circular Cylinder

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

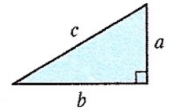
$$\text{Lateral surface area} = 2\pi r h$$



Right Triangle

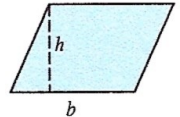
Pythagorean Theorem:

$$c^2 = a^2 + b^2$$



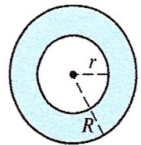
Parallelogram

$$\text{Area} = bh$$



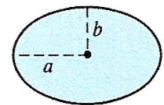
Circular Ring

$$\text{Area} = \pi(R^2 - r^2)$$



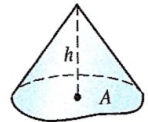
Ellipse

$$\text{Area} = \pi ab$$



Cone

$$\text{Volume} = \frac{Ah}{3} \quad (A = \text{Area of base})$$



Sphere

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

$$\text{Surface area} = 4\pi r^2$$

