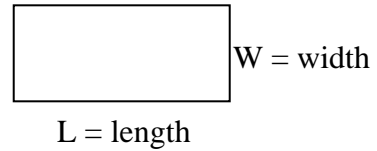


# Measurement

## Linear: (Lengths)

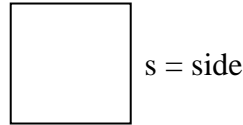
Perimeter of a rectangle

$$P = 2L + 2W$$



Perimeter of a square

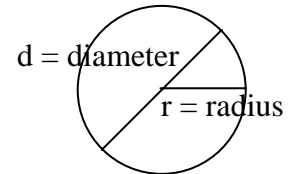
$$P = 4s$$



Circumference of a circle

$$C = 2\pi r$$

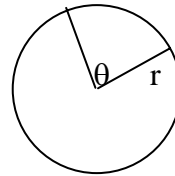
$$C = \pi d$$



Length of arc of a circle with central angle  $\theta$

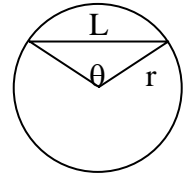
$$s = r\theta, \theta \text{ in radians}$$

$$s = \frac{\pi}{180} r\theta, \theta \text{ in degrees}$$



Length of a chord subtending an angle  $\theta$

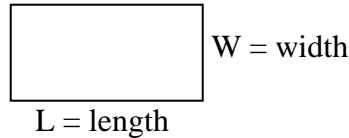
$$L = 2r \sin \frac{\theta}{2}$$



## Areas:

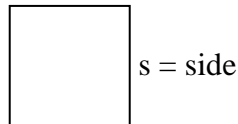
Area of a rectangle

$$A = LW$$



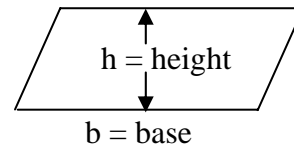
Area of a square

$$A = s^2$$



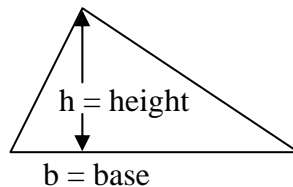
Area of a parallelogram

$$A = bh$$



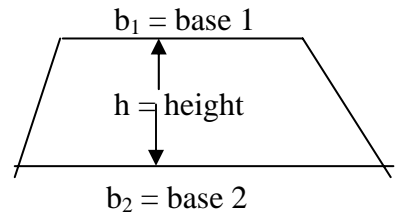
Area of a triangle

$$A = \frac{1}{2} bh$$



Area of a trapezoid

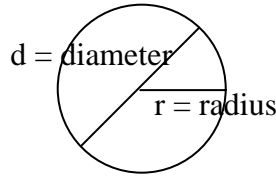
$$A = \frac{1}{2} h(b_1 + b_2)$$



Area of a circle

$$A = \pi r^2$$

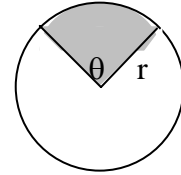
$$A = \frac{\pi}{4} d^2$$



Area of a sector of a circle

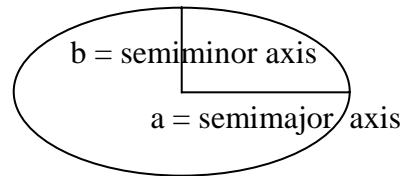
$$A = \frac{1}{2} r^2 \theta, \theta \text{ in radians}$$

$$A = \frac{\pi}{360} r^2 \theta, \theta \text{ in degrees}$$



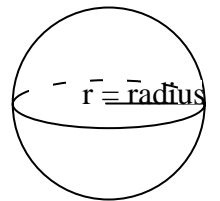
Area of an ellipse

$$A = \pi ab$$



Area of the surface of a sphere

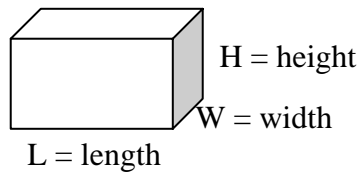
$$A = 4\pi r^2$$



**Volume:**

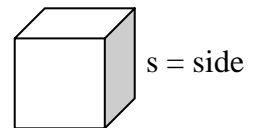
Volume of a rectangular solid

$$V = LWH$$



Volume of a cube

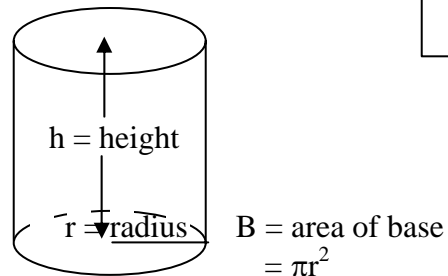
$$V = s^3$$



Volume of a right circular cylinder

$$V = \pi r^2 h$$

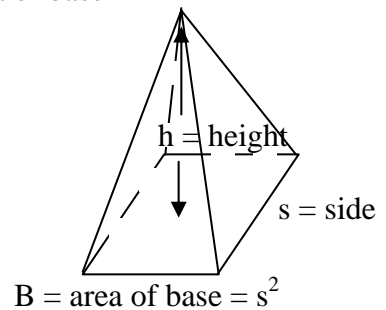
$$V = Bh$$



Volume of a pyramid with a square base

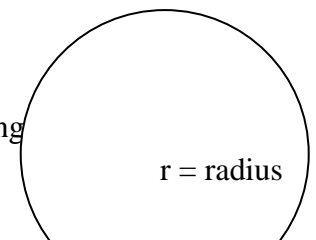
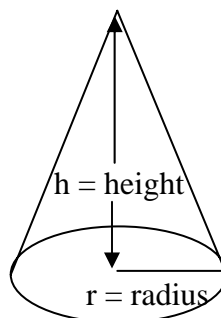
$$V = \frac{1}{3} s^2 h$$

$$V = \frac{1}{3} Bh$$



Volume of a right circular cone

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



Volume of a sphere

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

