

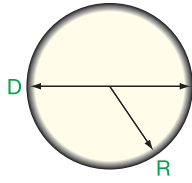
## Area and Volume Formulas

### Circle

$$D = 2R$$

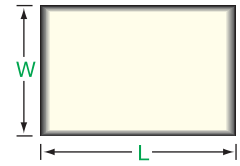
$$C = 2\pi R = \pi D$$

$$A = \pi R^2 = \frac{\pi D^2}{4}$$



### Rectangle

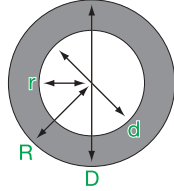
$$A = L \times W$$



### Circular Ring

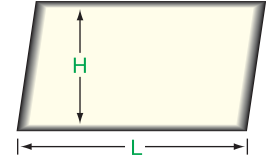
$$A = \pi (R^2 - r^2)$$

$$= 0.7854 (D^2 - d^2)$$



### Parallelogram

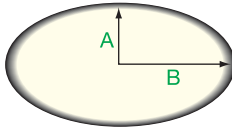
$$A = L \times H$$



### Ellipse

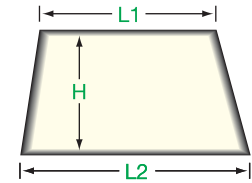
$$A = \pi \times A \times B$$

$$C = \pi \sqrt{2(A^2 + B^2)}$$



### Trapezoid

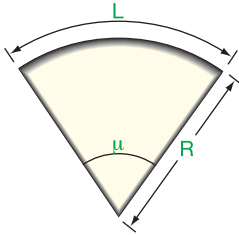
$$A = \frac{(L1 + L2) H}{2}$$



### Sector

$$A = \frac{\pi R^2 \alpha}{360} = \frac{RL}{2}$$

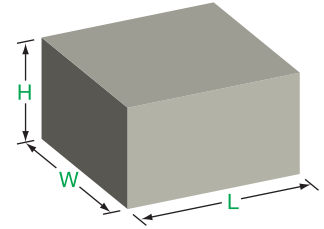
$$L = \frac{\pi R \alpha}{180} = \frac{2A}{R}$$



### Rectangular Solid

$$A = 2(WL + LH + HW)$$

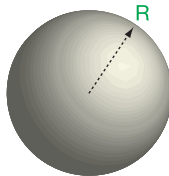
$$V = W \times L \times H$$



### Sphere

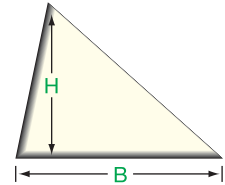
$$A = 4\pi R^2$$

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



### Triangle

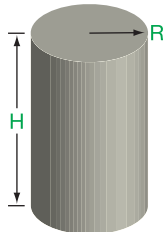
$$A = \frac{B \times H}{2}$$



### Cylinder

$$A = 2\pi R (R + H)$$

$$V = \pi R^2 H$$

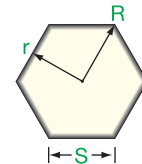


### Hexagon

$$S = R = 1.155r$$

$$A = 2.598 S^2$$

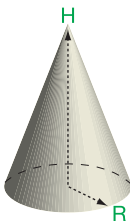
$$= 3.464 r^2$$



### Cone

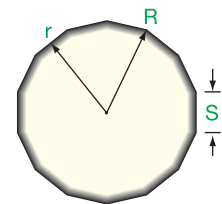
$$A = \pi R \sqrt{R^2 + H^2}$$

$$V = \frac{\pi R^2 H}{3}$$



### Regular Polygon

$$A = \frac{NSr}{2} = \frac{NS}{2} \sqrt{R^2 - \frac{S^2}{4}}$$



**A** = Area  
**V** = Volume  
 $\pi$  = 3.1416

**C** = Circumference  
**R** = Radius

**D** = Diameter  
**S** = Length of side

**N** = Number of sides  
 $\alpha$  = Angle