

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

## FORMULAS FOR SURFACE AREA

**Cube:**  $S = 6e^2$

where  $e$  = the length of an edge

**Prism:**  $S = 2B + Ph$

where  $B$  = the area of the base,  $P$  = the perimeter of the base  
 $h$  = height of the prism

**Cylinder:**  $S = 2\pi r(r + h)$

where  $r$  = the radius of the cylinder  
 $h$  = height of the cylinder

**Cone:**  $S = \pi r^2 + \pi rs$

where  $r$  = the radius of the cone  
 $s$  = slant height of the pyramid

**Pyramid:**  $S = B + \frac{1}{2}Ps$

where  $B$  = the area of the base,  $P$  = the perimeter of the base  
 $s$  = slant height of the pyramid

**Sphere:**  $S = 4\pi r^2$

where  $r$  = the radius of the sphere

## FORMULAS FOR VOLUME

**Cube:**  $V = e^3$

where  $e$  = the length of an edge

**Prism:**  $V = Bh$  or  $V = lwh$

where  $B$  = the area of the base,  $h$  = height of the prism

**Cylinder:**  $V = \pi r^2 h$

where  $r$  = the radius of the cylinder  
 $h$  = height of the cylinder

**Cone:**  $V = \frac{\pi r^2 h}{3}$

where  $r$  = the radius of the cone  
 $h$  = height of the cone

**Pyramid:**  $V = \frac{Bh}{3}$

where  $B$  = the area of the base,  $h$  = height of the pyramid

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

where  $r$  = the radius of the sphere