

# Geometric Formulas

## PLANE GEOMETRY

### Rectangle

Area:  $A = l \cdot w$

Perimeter:  $P = 2 \cdot l + 2 \cdot w$



### Square

Area:  $A = s^2$

Perimeter:  $P = 4 \cdot s$



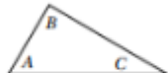
### Triangle

Area:  $A = \frac{1}{2} \cdot b \cdot h$



### Sum of Angle Measures

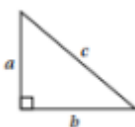
$A + B + C = 180^\circ$



### Right Triangle

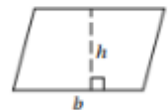
Pythagorean Theorem:

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



### Parallelogram

Area:  $A = b \cdot h$



### Trapezoid

Area:  $A = \frac{1}{2} \cdot h \cdot (a + b)$



### Circle

Area:  $A = \pi \cdot r^2$

Circumference:

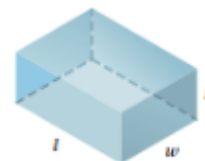
$C = \pi \cdot d = 2 \cdot \pi \cdot r$  ( $\frac{22}{7}$  and 3.14 are different approximations for  $\pi$ )



## SOLID GEOMETRY

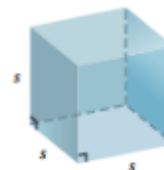
### Rectangular Solid

Volume:  $V = l \cdot w \cdot h$



### Cube

Volume:  $V = s^3$



### Right Circular Cylinder

Volume:  $V = \pi \cdot r^2 \cdot h$

Surface Area:

$S = 2 \cdot \pi \cdot r \cdot h + 2 \cdot \pi \cdot r^2$

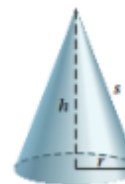


### Right Circular Cone

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

Surface Area:

$S = \pi \cdot r^2 + \pi \cdot r \cdot s$



### Sphere

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

Surface Area:  $S = 4 \cdot \pi \cdot r^2$

