

## GEOMETRIC FORMULAS

### Plane Geometry

*Rectangle*

Area:  $A = lw$

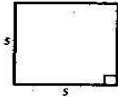
Perimeter:  $P = 2l + 2w$



*Square*

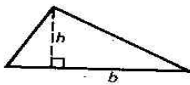
Area:  $A = s^2$

Perimeter:  $P = 4s$



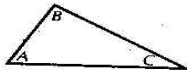
*Triangle*

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



Sum of Angle Measures:

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

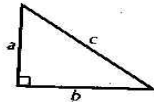


*Right Triangle*

Pythagorean Theorem

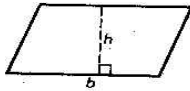
(Equation):

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



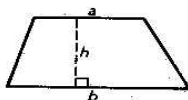
*Parallelogram*

Area:  $A = bh$



*Trapezoid*

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



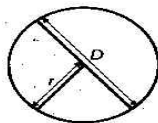
*Circle*

Area:  $A = \pi r^2$

Circumference:

$C = \pi D = 2\pi r$

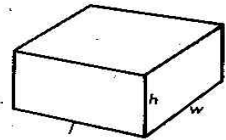
( $\frac{22}{7}$  and 3.14 are different approximations for  $\pi$ )



### Solid Geometry

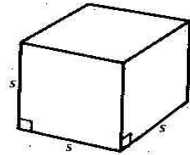
*Rectangular Solid*

Volume:  $V = lwh$



*Cube*

Volume:  $V = s^3$



*Right Circular Cylinder*

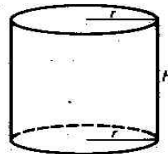
Volume:  $V = \pi r^2 h$

Lateral Surface Area:

$L = 2\pi rh$

Total Surface Area:

$S = 2\pi rh + 2\pi r^2$



*Right Circular Cone*

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

Lateral Surface Area:

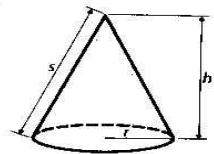
$L = \pi rs$

Total Surface Area:

$S = \pi r^2 + \pi rs$

Slant Height:

$s = \sqrt{r^2 + h^2}$



*Sphere*

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

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

