Symbols & Tables

SYMBOLS

$<$	less than
$>$	greater than
$\leq$	less than or equal to
$\geq$	greater than or equal to
$=$	equal in numerical value
$\neq$	not equal
$\approx$	approximately equal
$\cong$	congruent
$\sim$	similar
$\sqrt{\square}$	square root (radical sign)
π	pi (≈ 3.14 or $\approx \frac{22}{7}$)
α	alpha
β	beta
γ	gamma
δ	delta
θ	theta
$\{\ \}$	set
$\subset$	subset
$\cap$	intersection
$\cup$	union
$\varnothing$	empty set
∞	infinity
$\leftrightarrow$	line
$\rightarrow$	ray
$\overline{\square}$	line segment
$\overset{\frown}{\square}$	arc
$\angle$	angle
$m\angle$	measure of angle
$\perp$	perpendicular
$\parallel$	parallel
$\llcorner$	right angle

VOLUME

Measure of inscribed angle =
½ measure of intercepted arc

Perimeter: add the length of each side

Circumference of a circle = $2\pi r$ or πd

Area

rectangle = bh (or base x height)
triangle = ½ bh
square = bh or s^2
parallelogram or rhombus = bh
trapezoid = $\frac{\text{base}_1 + \text{base}_2}{2}(h)$
circle = πr^2
ellipse =
(½ short axis)(½ long axis)(π)

Surface Area

rectangular solid, cube, prism,
pyramid: add the area of each face
cylinder: 2(area of base) + $2\pi rh$
or $2\pi r^2 + 2\pi rh$
sphere: $4\pi r^2$

Volume

(B = area of base)
rectangular solid, prism = Bh
cylinder = Bh
pyramid and cone = $(1/3)(Bh)$
sphere: $\frac{4}{3}\pi r^3$

MISCELLANEOUS

Number of degrees

sum of interior angles of a regular polygon

$(N - 2) \times 180^0$ (N = number of sides)

sum of interior angles of a quadrilateral: 360^0

sum of interior angles of a triangle: 180^0

sum of etxerior angles of a regular polygon: 360^0

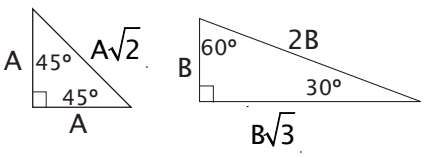
Measure of central angle = measure of intercepted arc

Pythagorean Theorem

$$L^2 + L^2 = H^2$$

$$\sin^2\theta + \cos^2\theta = 1$$

Special Triangles



Trigonometry functions

$$\text{sine}(\sin) = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\text{cosine}(\cos) = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\text{tangent}(\tan) = \frac{\text{opposite}}{\text{adjacent}}$$

$$\text{cosecant}(\csc) = \frac{\text{hypotenuse}}{\text{opposite}}$$

$$\text{secant}(\sec) = \frac{\text{hypotenuse}}{\text{adjacent}}$$

$$\text{cotangent}(\cot) = \frac{\text{adjacent}}{\text{opposite}}$$