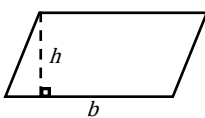
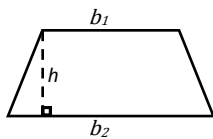
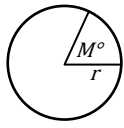
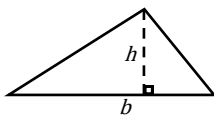
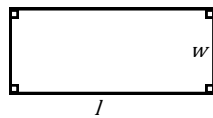
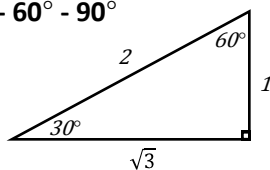
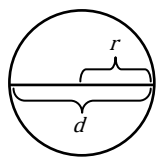
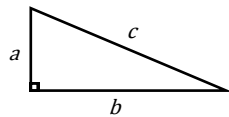
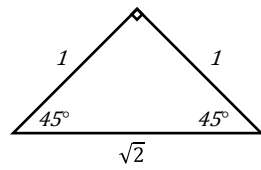
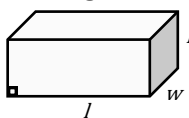
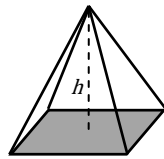
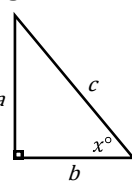

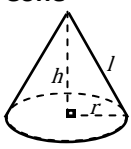
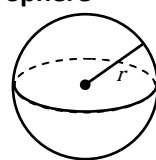


# Geometry EOC Released Items – Formula Sheet

## End of Course Mathematics Reference Sheet

<p><b>Parallelogram</b></p>  <p><math>P = \text{sum of all sides}</math> <math>A = bh</math></p>	<p><b>Trapezoid</b></p>  <p><math>A = \frac{h(b_1 + b_2)}{2}</math></p>	<p><b>Arc and Sector</b></p>  <p>Arc Length = <math>\left(\frac{M}{360}\right) \cdot 2\pi r</math> Sector Area = <math>\left(\frac{M}{360}\right) \cdot \pi r^2</math></p>
<p><b>Triangle</b></p>  <p><math>P = \text{sum of all sides}</math> <math>A = \frac{bh}{2}</math></p>	<p><b>Rectangle</b></p>  <p><math>P = 2l + 2w</math> <math>A = lw</math></p>	<p><b>30° - 60° - 90°</b></p> 
<p><b>Circles</b></p>  <p><math>C = 2\pi r</math> <math>C = \pi d</math> <math>A = \pi r^2</math> <math>\pi \approx 3.14</math></p>	<p><b>Pythagorean Theorem</b></p>  <p><math>a^2 + b^2 = c^2</math></p>	<p><b>45° - 45° - 90°</b></p> 
<p><b>Rectangular Solid</b></p>  <p>Volume = <math>lwh</math> Surface Area = <math>2lw + 2lh + 2wh</math></p>	<p><b>Pyramid</b></p>  <p><math>B = \text{area of base (shaded)}</math> Volume = <math>\frac{Bh}{3}</math></p>	<p><b>Trigonometric Ratios</b></p>  <p><math>\sin x^\circ = \frac{a}{c}</math> <math>\cos x^\circ = \frac{b}{c}</math> <math>\tan x^\circ = \frac{a}{b}</math></p>
<p><b>Cylinder</b></p>  <p>Volume = <math>\pi r^2 h</math> Surface Area = <math>2\pi rh + 2\pi r^2</math></p>	<p><b>Cone</b></p>  <p><math>l = \text{slant height}</math> Volume = <math>\frac{\pi r^2 h}{3}</math> Surface Area = <math>\pi rl + \pi r^2</math></p>	<p><b>Sphere</b></p>  <p>Volume = <math>\frac{4\pi r^3}{3}</math> Surface Area = <math>4\pi r^2</math></p>
Miscellaneous Formulas	Area of an equilateral triangle	$A = \frac{s^2\sqrt{3}}{4}$ s = length of a side
	Distance	rate · time
	Interest	principal · rate · time in years
	Sum of the angles of a polygon having n sides	$(n - 2)180^\circ$
	Distance between points on a coordinate plane	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
	Midpoint	$\left(\frac{x_2 + x_1}{2}, \frac{y_2 + y_1}{2}\right)$
	Slope of a nonvertical line (where $x^2 \neq x^1$ )	$m = \frac{y_2 - y_1}{x_2 - x_1}$
	Slope Intercept (where m = slope, b = intercept)	$y = mx + b$
	Last term of an arithmetic series	$a_n = a + (n - 1)d$
	Last term of a geometric series (where $n \geq 1$ )	$a_n = ar^{n-1}$
	Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
	Area of a square	$A = s^2$
	Volume of a cube	$V = s^3$
Area of a regular polygon	$A = \frac{1}{2}ap$ a = apothem, p = perimeter	

# Lateral Area, Surface Area & Volume

$P$  = perimeter of base

$B$  = area of base

$l$  = slant height

**Rectangle:**  $A = bh$

**Circle:**  $A = \pi r^2$

**Triangle:**  $A = \frac{bh}{2}$

**Trapezoid:**  $A = \frac{h(b_1 + b_2)}{2}$

**Lateral Area of a Prism:**  $LA = PH$

**Surface Area of a Prism:**  $SA = PH + 2B$

**Lateral Area of a Cylinder:**  $LA = 2\pi rH$

**Surface Area of a Cylinder:**  $SA = 2\pi rH + 2\pi r^2$

**Lateral Area of a Pyramid:**  $LA = \frac{Pl}{2}$

**Surface Area of a Pyramid:**  $SA = \frac{Pl}{2} + B$

**Volume of a Prism:**  $V = BH$

**Volume of a Cylinder:**  $V = \pi r^2 H$

**Volume of a Cone:**  $V = \frac{\pi r^2 H}{3}$

**Volume of a Pyramid:**  $V = \frac{BH}{3}$

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

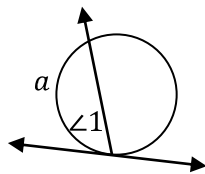
**Lateral Area of a Cone:**  $LA = \pi r l$

**Surface Area of a Cone:**  $SA = \pi r l + \pi r^2$

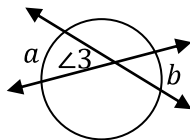
**Surface Area of a Sphere:**  $SA = 4\pi r^2$

## Circles

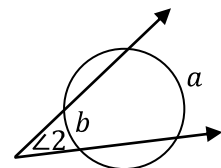
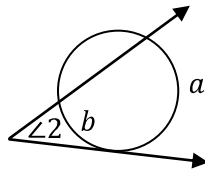
### Secant & Tangent Angles



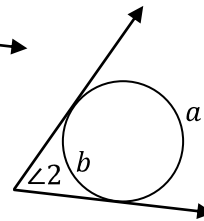
$$\angle 1 = \frac{1}{2}a$$



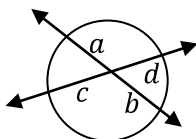
$$\angle 3 = \frac{1}{2}(a + b)$$



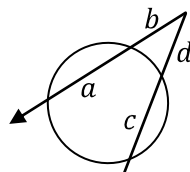
$$\angle 2 = \frac{1}{2}(a - b)$$



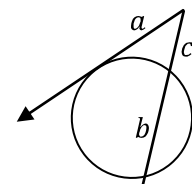
### Secant & Tangent Segment Lengths



$$ab = cd$$



$$b(a + b) = d(c + d)$$



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