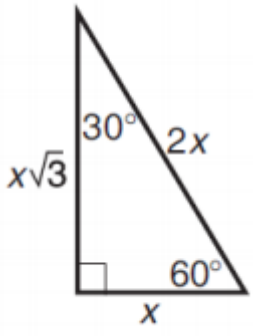
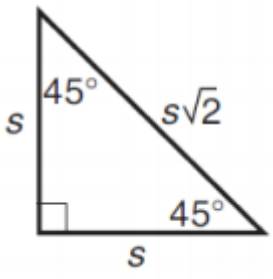
Algebra 1 Formulas

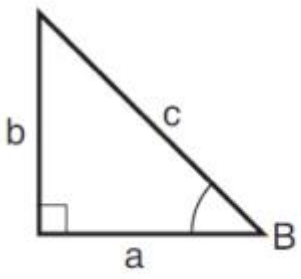
$P = 2L + 2W$	$S = Ph + 2B$	$\sin A = \frac{opposite}{hypotenuse}$
$P = 4s$	$S = 6s^2$	$\cos A = \frac{adjacent}{hypotenuse}$
$C = \pi d$	$S = 2\pi rh + 2\pi r^2$	$\tan A = \frac{opposite}{adjacent}$
$d = 2r$	$S = \frac{1}{2}PL + B$	$a^2 + b^2 = c^2$
	$S = \pi rL + \pi r^2$	$m = \frac{y_2 - y_1}{x_2 - x_1}$
$A = LW$	$S = 4\pi r^2$	$y = mx + b$
$A = bh$	$V = Bh$	$y - y_1 = m(x - x_1)$
$A = s^2$	$V = s^3$	$M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
$A = \frac{1}{2}bh$	$V = \pi r^2 h$	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
$A = \frac{1}{2}(b_1 + b_2)h$	$V = \frac{1}{3}Bh$	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
$A = \frac{1}{2}d_1 d_2$	$V = \frac{1}{3}\pi r^2 h$	$d = rt$
$A = \pi r^2$	$V = \frac{4}{3}\pi r^3$	$I = prt$
		${}_nC_r = \frac{n!}{r!(n-r)!}$
		${}_nP_r = \frac{n!}{(n-r)!}$

Special Right Triangles





Trigonometric Ratios



$\sin B = \frac{b}{c}$

$\cos B = \frac{a}{c}$

$\tan B = \frac{b}{a}$

Mathematics Formula Sheets for End-of-Course Exams

Use at least two decimal place values when approximating square roots or trigonometric ratios.

Description	Formula	Variables
Arc Length	$L = \frac{m\overset{\frown}{BC}}{360^\circ}\pi d$	L: Arc Length B, C: endpoints of arc d: diameter of the circle m: the measure of
Area of Sector	$A = \frac{m\overset{\frown}{BC}}{360^\circ}\pi r^2$	A: Area of Sector B, C: endpoints of intercepted arc r: radius of the circle m: the measure of
Cylinder	$SA = 2\pi r^2 + 2\pi rh$	SA: Surface Area r: radius of the base h: height
	$V = \pi r^2 h$	V: Volume r: radius of the base h: height
Cone	$SA = \pi r^2 + \pi rl$	SA: Surface Area r: radius of the base l: slant height
	$V = \frac{1}{3}Bh$ or $V = \frac{1}{3}\pi r^2 h$	V: Volume r: radius of the base h: height B: area of the base
Prism	$V = Bh$	V: Volume B: area of the base H: height
	$SA = 2B + Ph$ or $SA = 2B + L$	SA: Surface Area B: area of the base P: Perimeter of the base h: height L: lateral surface area
Pyramid	$V = \frac{1}{3}Bh$	V: Volume B: area of the base h: height
Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	x: solution a, b, c: coefficients
Sphere	$V = \frac{4}{3}\pi r^3$	V: Volume r: radius
	$SA = 4\pi r^2$	SA: Surface Area r: radius