

FORMULA SHEET

Area	Circle	$A = \pi r^2$
	Rectangle	$A = lw$ or $A = bh$
	Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	Triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
Circumference	Circle	$C = 2\pi r$ or $C = \pi d$
Distance Formula		$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Midpoint Formula		$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
Perimeter	Rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Pi	π	$\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
Point-Slope Form of an Equation		$y - y_1 = m(x - x_1)$
Pythagorean Theorem		$a^2 + b^2 = c^2$
Quadratic Formula		$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Slope of a Line		$m = \frac{y_2 - y_1}{x_2 - x_1}$
Slope-Intercept Form of an Equation		$y = mx + b$
Simple Interest Formula		$I = prt$
Standard Form of an Equation		$Ax + By = C$
Surface Area	Cone (lateral)	$S = \pi rl$
	Cone (total)	$S = \pi rl + \pi r^2$ or $S = \pi r(l + r)$
	Cube	$S = 6s^2$
	Cylinder (lateral)	$S = 2\pi rh$
	Cylinder (total)	$S = 2\pi rh + 2\pi r^2$ or $S = 2\pi r(h + r)$
	Sphere	$S = 4\pi r^2$
Volume	Prism or Cylinder	$V = Bh$ *
	Pyramid or Cone	$V = \frac{1}{3}Bh$ *
	Sphere	$V = \frac{4}{3}\pi r^3$
<i>*B represents the area of the Base of a solid figure</i>		

CONVERSION GUIDE

Length	
Metric	Standard
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches
Capacity and Volume	
Metric	Standard
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces
Mass and Weight	
Metric	Standard
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces
Time	
	1 year = 365 days
	1 year = 12 months
	1 year = 52 weeks
	1 week = 7 days
	1 day = 24 hours
	1 hour = 60 minutes
	1 minute = 60 seconds