

Mathematics Reference Sheet

	Area
Triangle	$\frac{1}{2}bh$
Rectangle	lw
Trapezoid	$\frac{1}{2}h(b_1 + b_2)$
Parallelogram	bh
Circle	πr^2

Key	
b = base	w = width
B = area of base	ℓ = slant height
h = height	d = diameter
l = length	r = radius
Use 3.14 for π .	

Circumference = $\pi d = 2\pi r$

	Volume
Right Cone	$\frac{1}{3}\pi r^2h$
Square Pyramid	$\frac{1}{3}lwh$
Sphere	$\frac{4}{3}\pi r^3$
Right Cylinder	πr^2h
Right Rectangular Prism	lwh
Triangular Prism	Bh

Total Surface Area

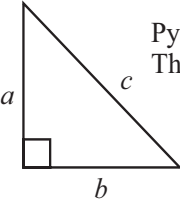
$\pi r\ell + \pi r^2$

$2\ell l + l^2$

$4\pi r^2$

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

$2(lw) + 2(hw) + 2(lh)$

 <p style="text-align: center;">Pythagorean Theorem: $a^2 + b^2 = c^2$</p>	<p>Distance between two points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$:</p> $\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$
<p>Slope-intercept form of an equation of a line, where m = slope and b = the y-intercept:</p> $y = mx + b$	<p>Midpoint between two points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$:</p> $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
<p>Distance, rate, time formula, where d = distance, r = rate, t = time:</p> $d = rt$	<p>Simple Interest = prt where p = principal, r = rate, t = time</p>

Conversions

1 yard = 3 feet = 36 inches	1 cup = 8 fluid ounces
1 mile = 1,760 yards = 5,280 feet	1 pint = 2 cups
1 liter = 1,000 milliliters = 1,000 cubic centimeters	1 quart = 2 pints
1 meter = 100 centimeters = 1,000 millimeters	1 gallon = 4 quarts
1 kilometer = 1,000 meters	1 meter = 3.28 feet
1 gram = 1,000 milligrams	1 kilogram = 2.20 pounds
1 kilogram = 1,000 grams	1 kilometer = 0.62 miles
1 pound = 16 ounces	1 inch = 2.54 centimeters
1 ton = 2,000 pounds	