

















## Cheat Sheet - F8

Geometric Formulas

2 Dimensions				3 Dimensions				
		Perimeter	Area			Lateral Area	Surface Area	Volume
		<i>distance around the outside (the fence)</i>	<i>space on the inside (the yard)</i>			<i>the area of the sides of an object (bases not included)</i>	<i>the total area of the outside of an object</i>	<i>the space inside of a container</i>
Rectangle		$2l + 2w$	$l \times w$	Rectangular Prism			$2 \times (l \times w)$ of top $+ 2 \times (l \times w)$ of side $+ 2 \times (l \times w)$ of front	area of the Base $\times$ height  $BH$
Triangle		$s_1 + s_2 + s_3$	$\frac{1}{2} bh$	Triangular Prism			$bh$ (of triangle) $+ (l \times w)$ of side <sub>1</sub> $+ (l \times w)$ of side <sub>2</sub> $+ (l \times w)$ of side <sub>3</sub>	area of the Base $\times$ height  $BH$
Square		$4s$	$s^2$	Right Prisms		perimeter of the Base $\times$ height  $Ph$	lateral surface area $+ 2$ (area of the Base)  $Ph + 2B$	area of the Base $\times$ height  $BH$
Circle		$2\pi r$ or $\pi d$ (Circumference)	$\pi r^2$	Cylinder		area of the lateral space (rectangle)  $2\pi rh$	lateral surface area $+ 2$ (area of the Base)  $2\pi rh + 2\pi r^2$	area of the Base $\times$ height  $\pi r^2 H$
Parallelogram		$2s_1 + 2s_2$	$bh$	Pyramid		$\frac{1}{2}$ perimeter of the Base $\times$ slant height  $\frac{1}{2}Pl$	lateral surface area $+ area of the Base$  $\frac{1}{2}Pl + B$	$\frac{1}{3}$ area of the Base $\times$ height  $\frac{1}{3}BH$
Trapezoid		$s_1 + s_2 + s_3 + s_4$	$\frac{1}{2}(b_1 + b_2)h$	Cone		$\pi \times$ radius $\times$ slant height  $\pi rl$	lateral surface area $+ area of the Base$  $\pi rl + \pi r^2$	$\frac{1}{3}$ area of the Base $\times$ height  $\frac{1}{3}BH$
Regular Polygons		$ns$	$\frac{1}{2}aP$	Sphere			$4\pi r^2$	$\frac{2}{3}$ volume of the cylinder that contains it or $\frac{4}{3}\pi r^3$

l = length  
w = width  
b = base of the triangle  
h = perpendicular height of the triangle  
s = side length

d = diameter  
r = radius  
n = number of sides  
a = apothem

H = perpendicular height of the 3 dimensional figure/altitude  
l = slant height  
P = perimeter  
B = area of the base  
L = lateral surface area  
S = total surface area  
V = volume