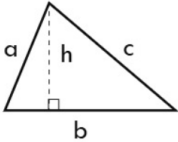
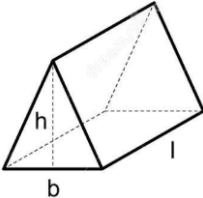
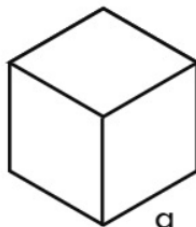
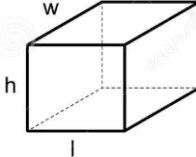
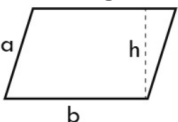
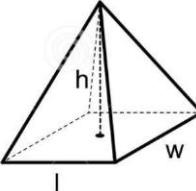
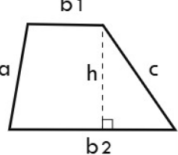
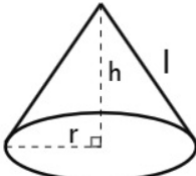


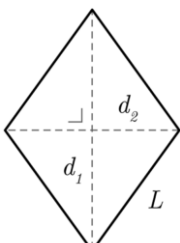
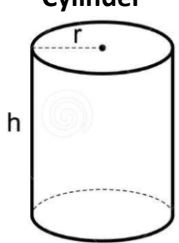
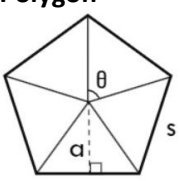
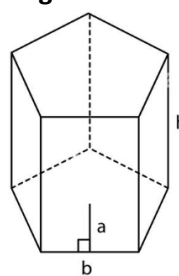
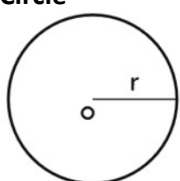
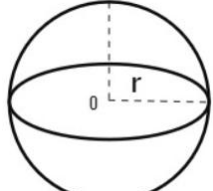
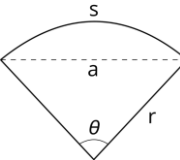
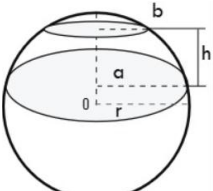
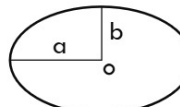
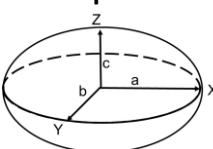
Harold's Geometry Shape Formulas

Cheat Sheet

25 April 2025

Perimeter, Area, Surface Area, and Volume

2D Shapes	Perimeter (P, C)	Area (A)	3D Shapes	Surface Area (SA)	Volume (V)
Units	Units	Units ²		Units ²	Units ³
Example	Fence	Pasture		Paint It	Fill It
Triangle 	$a + b + c$	$\frac{1}{2}bh$	Triangular Prism 	$bh + la + lb + lc$	$\frac{1}{2}bhl$
Square 	$4a$	a^2	Cube 	$6a^2$	a^3
Rectangle 	$2(l + w)$	lw	Rectangular Prism 	$2(lw + lh + wh)$	lwh
Parallelogram 	$2(a + b)$	bh	Pyramid 	$lw + la$ <i>la: lateral area</i>	$\frac{1}{3}lwh$
Trapezoid 	$a + b_1 + b_2 + c$	$\frac{1}{2}(b_1 + b_2)h$	Cone 	$\pi r^2 + \pi rl$	$\frac{1}{3}\pi r^2 h$

Rhombus 	$4L$	$\frac{1}{2}d_1d_2$	Cylinder 	$2\pi rh + 2\pi r^2$	$\pi r^2 h$
Regular Polygon 	ns	$n\left(\frac{1}{2}as\right)$ a : apothem n : number of sides	Regular Prism 	$nab + nbh$	$\frac{n}{2}abh$
Circle 	$2\pi r$ $= \pi d$	πr^2	Sphere 	$4\pi r^2$	$\frac{4}{3}\pi r^3$
Circular Sector 	$s + 2r$	$\frac{\theta}{360^\circ}\pi r^2$	Spherical Segment 	$\pi(a^2 + b^2 + 2rh)$ h : height of segment	$\frac{1}{6}\pi h(3a^2 + 3b^2 + h^2)$
Ellipse 	$\approx \pi(a + b)$	πab	Ellipsoid 	See Knud Thomsen's Formula	$\frac{4}{3}\pi abc$

Sources:

- TPT, <https://www.teacherspayteachers.com/Product/Perimeter-Area-Surface-Area-Volume-Cheat-Sheet-7377920>