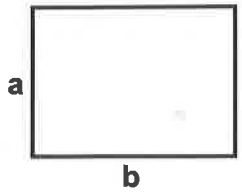
Area and Perimeter Formulas

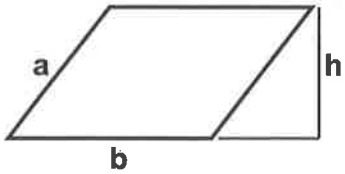


Rectangle

A Rectangle is a quadrilateral with four equal angles at 90°.

Area = ab

Perimeter = 2(a + b)

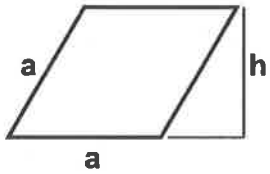


Parallelogram

A Parallelogram is a quadrilateral with opposite sides parallel.

Area = bh

Perimeter = 2(a + b)

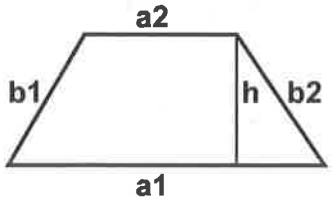


Rhombus

A Rhombus is a Parallelogram with all sides equal.

Area = ah

Perimeter = 4a

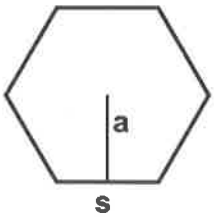


Trapezoid

A Trapezoid is a Quadrilateral with at least one pair of parallel sides.

Area = $\frac{a1 + a2}{2}$ h

Perimeter = a1 + a2 + b1 + b2



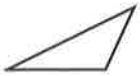
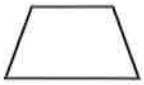
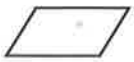
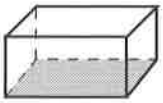
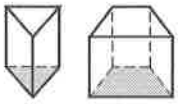
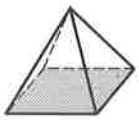
Regular n-gon

A Regular Polygon is a polygon for which n sides and angles are equal.

Area = $\frac{1}{2}$ (a· n• s)

Perimeter = n· s

Wisconsin Mathematics Formula Reference Sheet

Shape	Formulas for Area (A) and Circumference (C)
Triangle 	$A = \frac{1}{2}bh = \frac{1}{2} \times$ base $\times$ height
Rectangle 	$A = lw =$ length $\times$ width
Trapezoid 	$A = \frac{1}{2}(b_1 + b_2)h = \frac{1}{2} \times$ sum of bases $\times$ height
Parallelogram 	$A = bh =$ base $\times$ height
Circle 	$A = \pi r^2 = \pi \times$ square of radius $C = 2\pi r = 2 \times \pi \times$ radius
Figure	**Formulas for Volume (V) and Surface Area (SA)**
Rectangular Prism 	$V = lwh =$ length $\times$ width $\times$ height $SA = 2lw + 2hw + 2lh$ $=$ 2(length $\times$ width) + 2(height $\times$ width) + 2(length $\times$ height)
General Prisms 	$V = Bh =$ area of base $\times$ height $SA =$ sum of the areas of the faces
Right Circular Cylinder 	$V = Bh =$ area of base $\times$ height $SA = 2B + Ch =$ (2 $\times$ area of base) + (circumference $\times$ height)
Right Pyramid  	$V = \frac{1}{3}Bh = \frac{1}{3} \times$ area of base $\times$ height $SA = B + \frac{1}{2}P\ell$ $=$ area of base + ($\frac{1}{2} \times$ perimeter of base $\times$ slant height)
Right Circular Cone 	$V = \frac{1}{3}Bh = \frac{1}{3} \times$ area of base $\times$ height $SA = B + \frac{1}{2}C\ell =$ area of base + ($\frac{1}{2} \times$ circumference $\times$ slant height)
Sphere 	$V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times$ cube of radius $SA = 4\pi r^2 = 4 \times \pi \times$ square of radius

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