

Wisconsin Mathematics Formula Reference Sheet

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