Area, Surface Area, and Volume Formulas

Area	Surface Area	Volume
Rectangle $A = lw$ l = length, w = width	**Prism** $SA = 2B + Ph$ B = area of base, h = height, P = perimeter of base **Rectangular Prism** $SA = 2(lw + lh + wh)$ l = length, h = height, w = width	**Prism** $V = Bh$ B = area of base, h = height
Square $A = s^2$ s = side	**Pyramid** $SA = B + \frac{1}{2}Ps$ B = area of base, s = slant height, P = perimeter of base **Square Pyramid** $SA = 2bs + b^2$ b = base, s = slant height	**Pyramid** $V = \frac{1}{3}Bh$ B = area of base, h = height
Triangle $A = \frac{1}{2}bh$ b = base, h = height	**Cylinder** $SA = 2\pi r^2 + 2\pi rh$ r = radius, h = height	**Cylinder** $V = \pi r^2 h$ r = radius, h = height
Trapezoid $A = \frac{1}{2}h(b_1 + b_2)$ h = height, b_1 & b_2 = base	**Cone** $SA = \pi r^2 + \pi rs$ r = radius, s = slant height	**Cone** $V = \frac{1}{3}\pi r^2 h$ r = radius, h = height
Circle $A = \pi r^2$ r = radius, π = 3.14	**Sphere** $SA = 4\pi r^2$ r = radius	**Sphere** $V = \frac{4}{3}\pi r^3$ r = radius
Regular Polygon $A = \frac{1}{2}Pa$ p = perimeter, a = apothem		

Perimeter = distance around a figure (excludes circles)

Circumference = distance around a circle ($C = 2\pi r$ or $C = \pi D$)