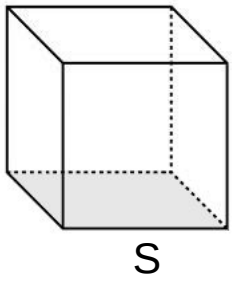
Surface Area and Volume

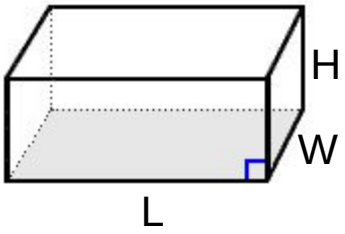
Cube



Surface Area = $6S^2$

Volume = S^3

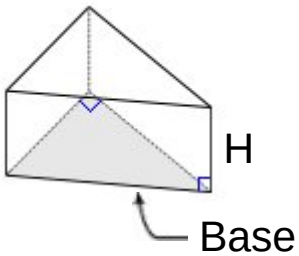
Rectangular Prism

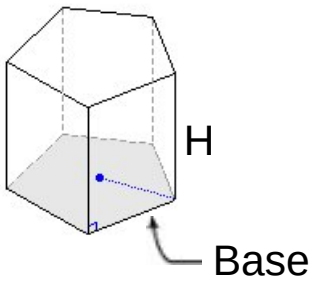


Surface Area = 2LW + 2HW + 2LH

Volume = LWH

General Prisms



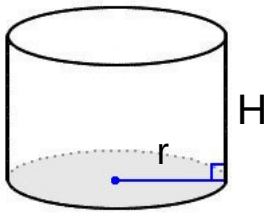


Surface Area = Sum of the areas of the faces.

Volume = Area of base times height.

Surface Area and Volume

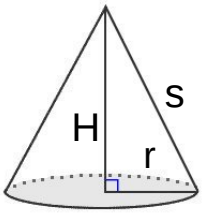
Right Circular Cylinder



Surface Area $= (2\pi r^2) + (\pi 2r H)$

Volume $= \pi r^2 H$

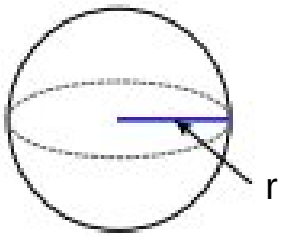
Right Circular Cone



Surface Area $= (\pi r s) + (\pi r^2)$

Volume $= \frac{1}{3} \pi r^2 H$

Sphere



Surface Area $= 4\pi r^2$

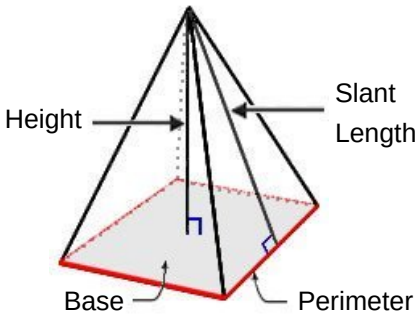
Volume $= \frac{4}{3} \pi r^3$

Surface Area and Volume

Types of Pyramids

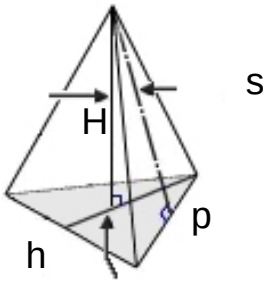
There are many types of Pyramids, and they are named after the shape of their base.

The general equations for Surface Area and Volume of Pyramids when all side faces are the same:



Surface Area = [Base Area] + $\frac{\text{Perimeter}}{2}$ x [Slant Length]

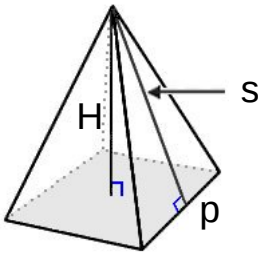
Volume = $\frac{1}{3}$ x [Base Area] x Height



Triangular Pyramid - Triangle Base

Surface Area = $\frac{1}{2}$ p h + $\frac{3}{2}$ p s

Volume = $\frac{1}{6}$ p h H



Square Pyramid - Square Base

Surface Area = p^2 + 2p s

Volume = $\frac{1}{3}$ p^2 H