Areas and Volumes

The equations here will be familiar to most users and are to demonstrate calculations with BlackBox

These are formulas to find the area and volume for various shapes.

Rectangle
Area = Base * Height

Parallelogram
Area = Base*Height [Parallelogram]

Trapezoid
Area = ½Height*(a+b) [Trapezoid ->Parallel sides a & b]

Circle
Area = Pi r² [Circle]
Circumference = 2 Pi r [Circle]

Triangle
Area = ½Base * Height [Triangle]

Cube
Volume = Length³ [Cube]
SurfaceArea = 6Length² [Cube]

Rectangular Prism
Area = Length * Width * Height [Rectangular Prism]
SurfaceArea =2((Width*Length)+(Height*Width)+(Height*Length)) [Rect Prism]

Sphere
Volume = ¾ Pi r³ [Sphere]

Triangular Prism
Volume = ½Base*Height*Length [Triangular Prism]

Trapezoidal Prism
Volume = ½(a+b)*Height*Length [Trapezoidal Prism]

Cone
Volume = (Pi r² Height) / 3 [Cone]

Pyramid
Volume = (Length*Base*Height) / 3 [Rectangular Pyramid]
Volume = (Length*Base*Height) / 6 [Triangular Pyramid]

Cylinder
Volume = Pi r² Length [Cylinder]

SurfaceArea = 2 Pi r^2 + (2 Pi r^2 Length) [Cylinder]