Calculating surface area and volume

1 Activate the TIN theme in a view or 3D scene from which you wish to calculate the surface area and volume.

2 From the Surface menu choose, Area and Volume Statistics.

3 On the Area and Volume Statistics dialog, specify a base height that represents the horizontal plane from which area and volume will be calculated, and press OK.

4 Specify whether you want to determine area and volume above or below the plane and press OK.

A dialog will report the 2D projected area, the surface area, and the volume.

Surface area is measured along the slope of a surface, taking height into consideration. The calculated area will always be greater than the area measured by simply using the 2D planimetric extent of a model. For example, think of a pyramid. When projected top down onto paper, it appears as a square. The 2D area of the square is certainly less than the total surface area of the pyramid. The surface area reported is that on the surface that falls above or below the specified height.

Volume calculates the cubic space between a TIN surface and the horizontal plane located at the specified height. Volume is determined either above or below the plane. When calculated above the plane, the volume reported represents the space that's above the plane and under the surface. When calculated below, the volume reported represents the space that's below the plane and above the surface.