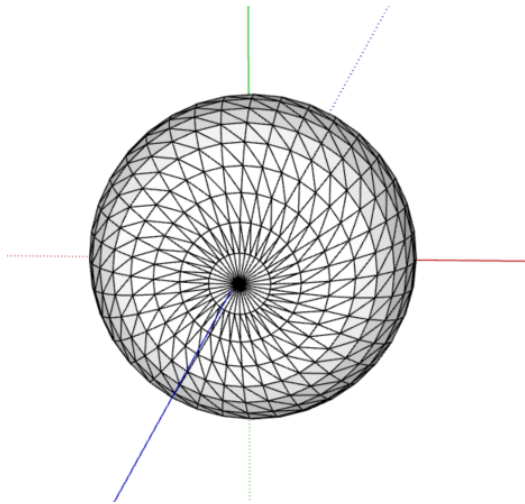


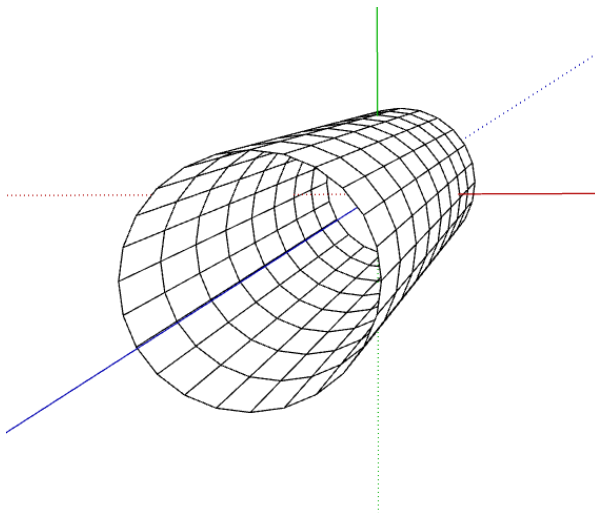
# Quadrics



## Sphere

- Center in origin
- Central axis coincident with Z axis (blue)
- Poles in positive and negative Z axis
- Stacks: number of divisions between poles
- Slices: number of divisions around axis

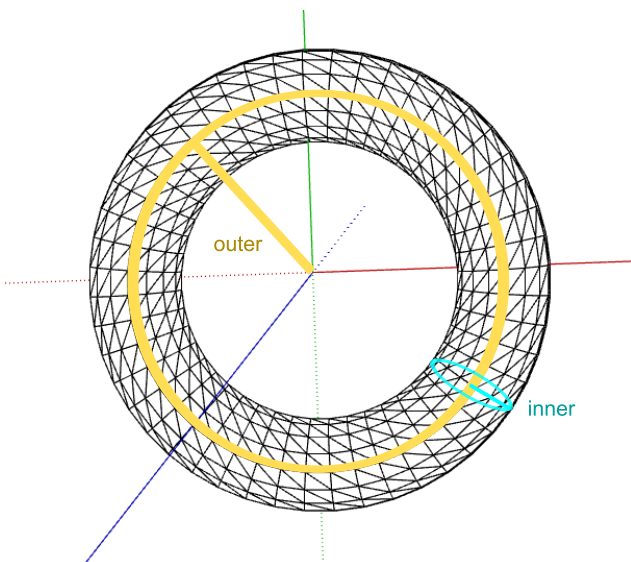
<https://www.opengl.org/resources/libraries/glut/spec3/node81.html>



## Cylinder

- Base in origin
- Central axis coincident with Z axis (blue)
- Height: size in the direction of the positive Z axis
- Base: radius of the base ( $Z = 0$ )
- Top: radius of the top ( $Z = \text{height}$ )
- Slices: number of divisions around the circumference
- Stacks: Number of divisions along the Z direction

<https://www.khronos.org/registry/OpenGL-Refpages/gl2.1/xhtml/gluCylinder.xml>



## Torus

- Centered in origin
- Symmetry around Z axis (blue)
- Inner radius: the "tube" radius (cyan)
- Outer radius: radius of the "circular axis" of the torus (yellow)

<http://freeglut.sourceforge.net/docs/api.php#GeometricObject>