Chapter 11
Complex Surfaces
Revolved Surfaces

**Revolved Surface 11.1**

Creates a revolved surface about a selected axis.

1. **Choose** Draw, Surfaces, Revolved Surface...
   or
2. **Type** Revsurf at the command prompt.
   Command: **revsurf**
   Current wire frame density: SURFTAB1=6
   SURFTAB2=6
   Select object to revolve: **pick**
   Select object that defines the axis of revolution: **pick**
   Specify start angle **<0>**: **enter**
   Specify included angle (+=ccw, -=cw) **<360>** **enter**
Suftab1 and Suftab2 11.2

Sets the number of tabulations for both directions to be generated for RULESURF and TABSURF. Also sets the mesh density in ROTATE3D the M direction for REVSURF and EDGESURF commands.

1. Type Suftab1 at the command prompt.
   Command: `surftab1`
   Enter new value for SURFTAB1 <6>: 30

2. Type Suftab2 at the command prompt.
   Command: `surftab2`
   Enter new value for SURFTAB2 <6>: 30
Tabulated Surfaces 11.3

Creates a tabulated surface from a path curve and a direction vector.

1. **Choose**  
   Draw, Surfaces, Tabulated Surfaces  
   or

2. **Type**  
   TABSURF at the command prompt.  
   Command: `tabsurf`  
   Select object for path curve:  
   Select object for direction vector:
Ruled Surface 11.4

Creates a ruled surface between two curves.

1. **Choose** Draw, Surfaces, Ruled Surface
   or

2. **Type** RULESURF at the command prompt.
   Command: *rulesurf*
   Current wire frame density: SURFTAB1=6
   Select first defining curve: P1
   Select second defining curve: P2
More Ruled Surface Examples 11.4

- Diagram 1: A ruled surface with two points, P1 and P2, and a line connecting them.
- Diagram 2: A ruled surface with a curve as a guide curve and a line connecting two points on the surface.
- Diagram 3: A ruled surface with a cone-like shape, connecting points P1 and P2.
**Edge Surface 11.5**

Creates a three-dimensional polygon mesh

1. **Choose** Draw, Surfaces, Edge Surface
   or
2. **Type** EDGESURF at the command prompt.

   Command: `edgesurf`

   Current wire frame density: SURFTAB1=6
   SURFTAB2=6

   Select object 1 for surface edge: P1
   Select object 2 for surface edge: P2
   Select object 3 for surface edge: P3
   Select object 4 for surface edge: P4