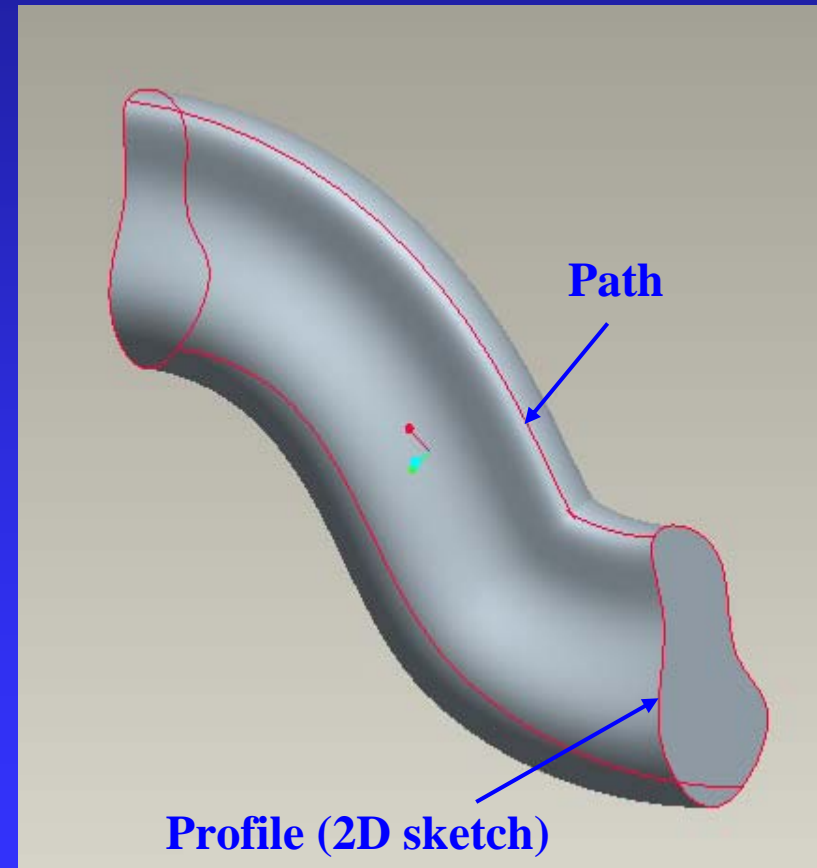


Sweep Command

Sweep command creates a solid by sweeping a profile along a specified path.

A sweep feature requires two sketches; a **profile** and a **path**. These two sketches cannot lie on the same plane or be parallel.

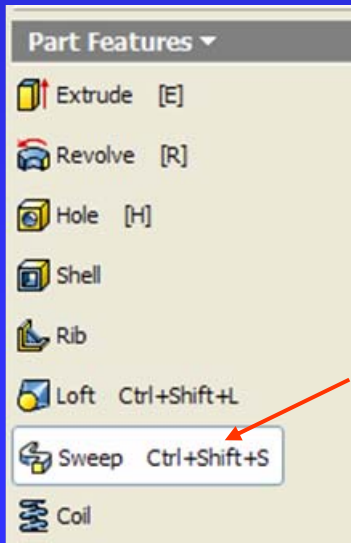
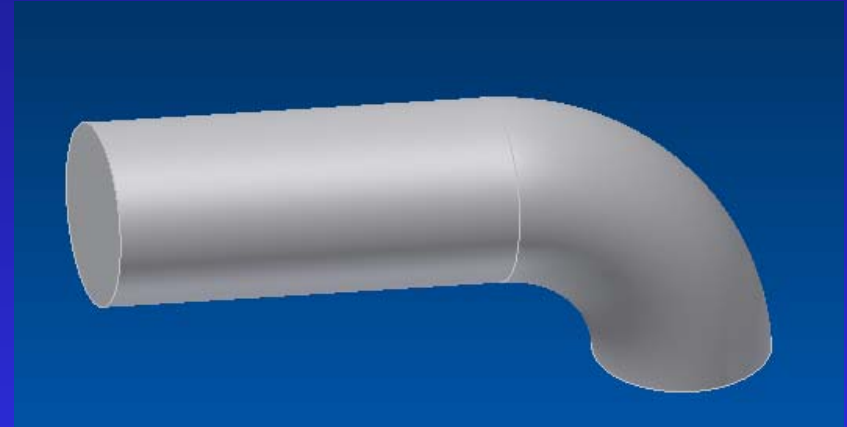
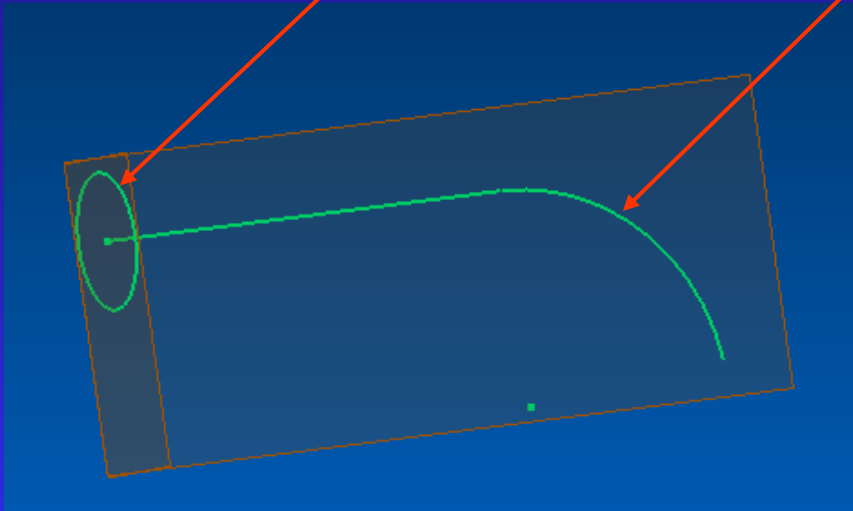
The path can be either open or closed profile. It could lie on one plane or lie on multiple planes (3D sketch)



Sweep Command

1. Select the XY plane and sketch a desired profile (circle).

2. Select the YZ plane and sketch the path.

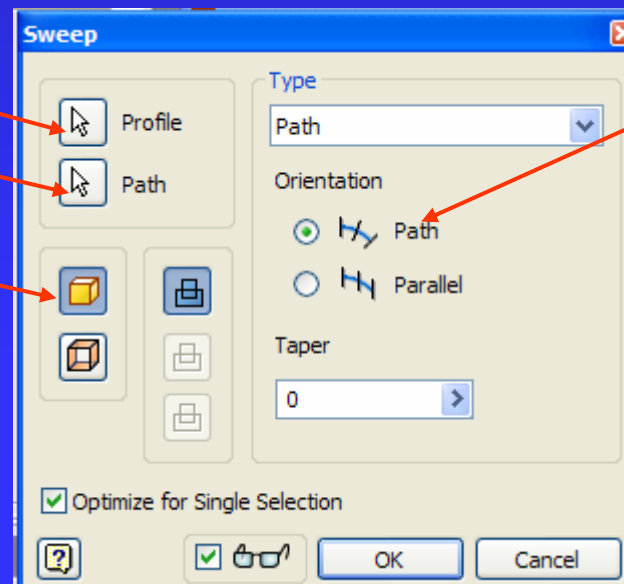


3. Click the Sweep icon.

4. Select profile

5. Select path

6. Select solid or hollow

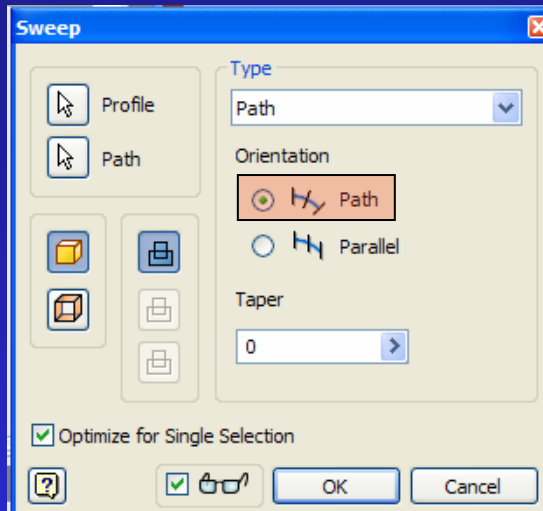


7. Select Orientation, Path

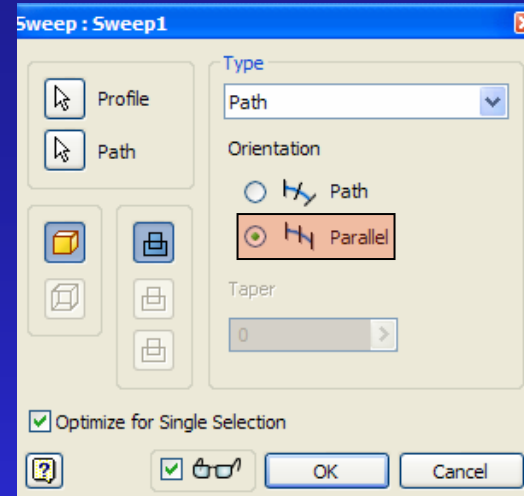
If there is only two sketches, Inventor selects both automatically.

Sweep Command – Orientation Option

Orientation option **Path**; holds the swept profile constant and perpendicular to the path



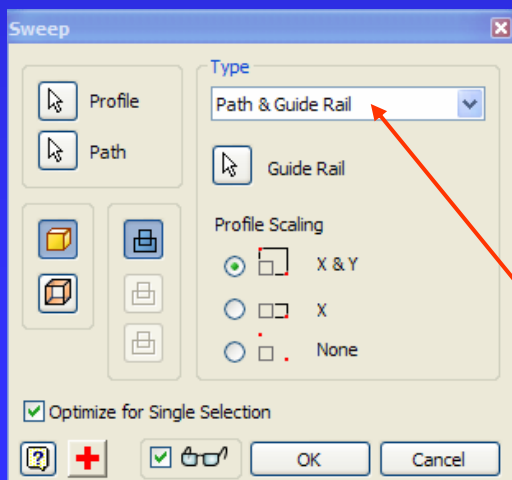
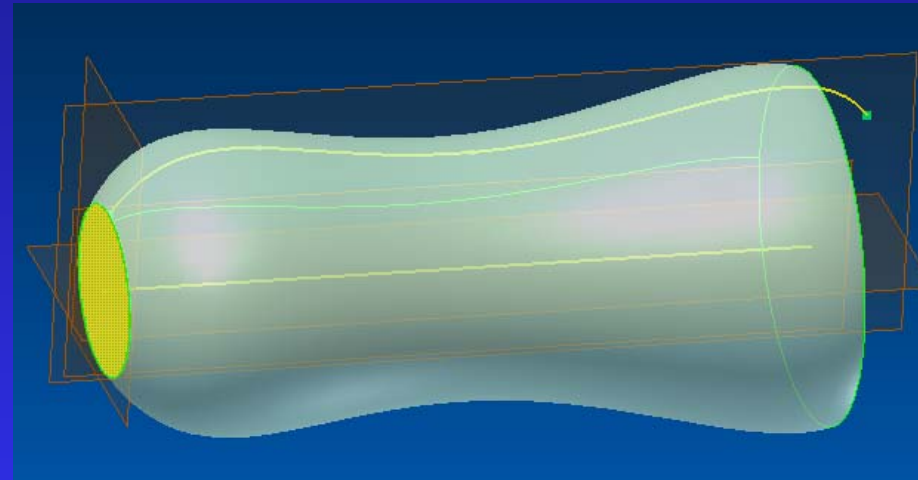
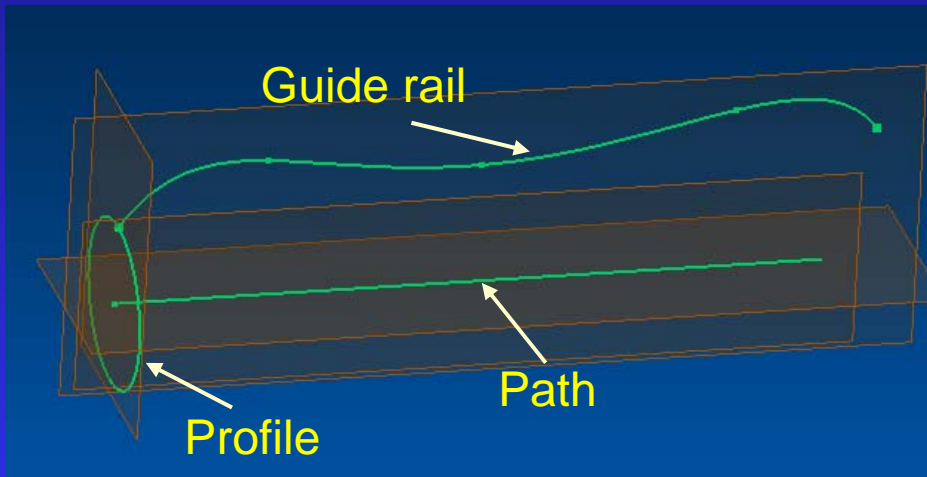
Orientation option **Parallel**; holds the swept profile parallel to the original profile.



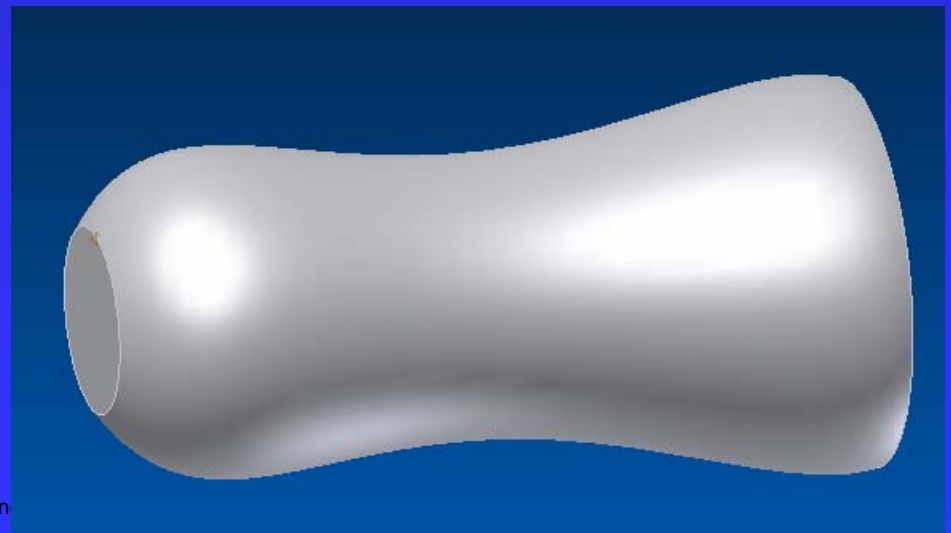
Sweep Command – Path and Guide Rail Option

You can sweep a profile along a path and use a guide to control the scale and twist of the profile. The Guide Rail has to touch the profile plane.

Sketch the profile, guide rail and path



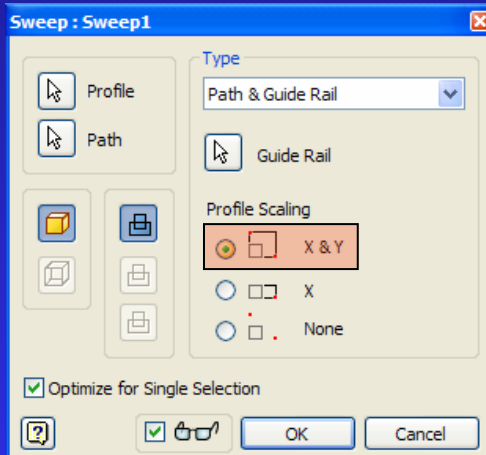
Select the **Path & Guide Rail** option from **Type** menu



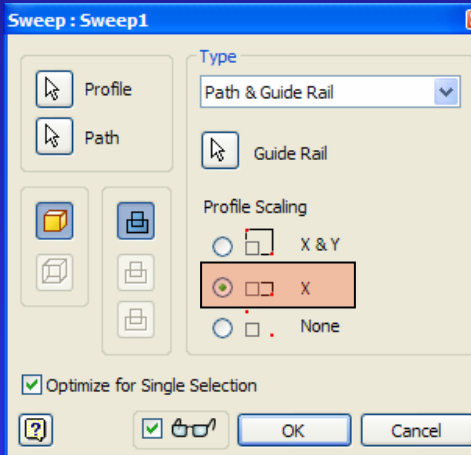
Sweep Command – Profile Scaling Option

You can specify how the swept section scales to meet the guide rail.

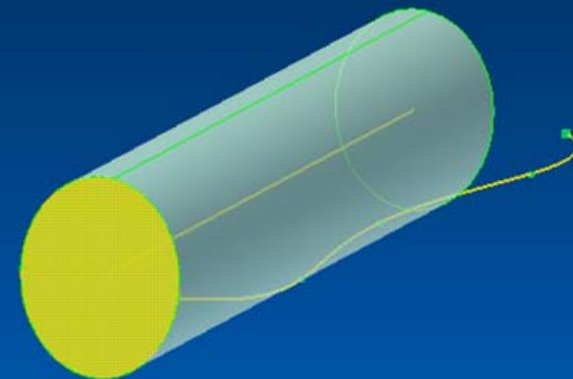
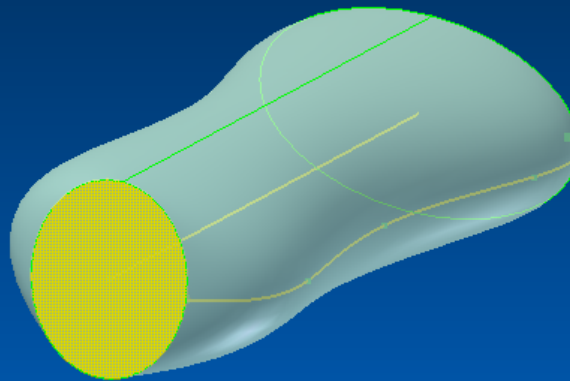
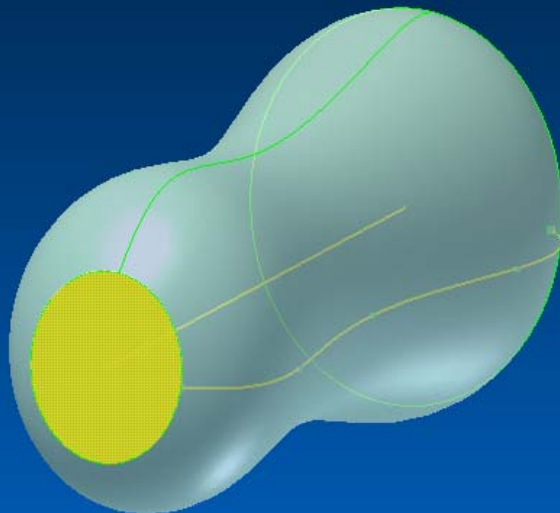
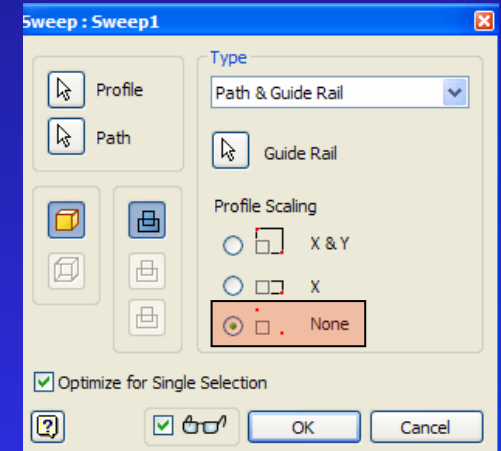
Follow the rail in X and Y directions



Follow the rail in X direction only.



Do not scale in the X or Y direction



Loft Command

Loft tool creates a feature that blends a shape between two or more different profiles. A loft is similar to sweep except you can use different and multiple shape profiles and multiple rails.

Profiles

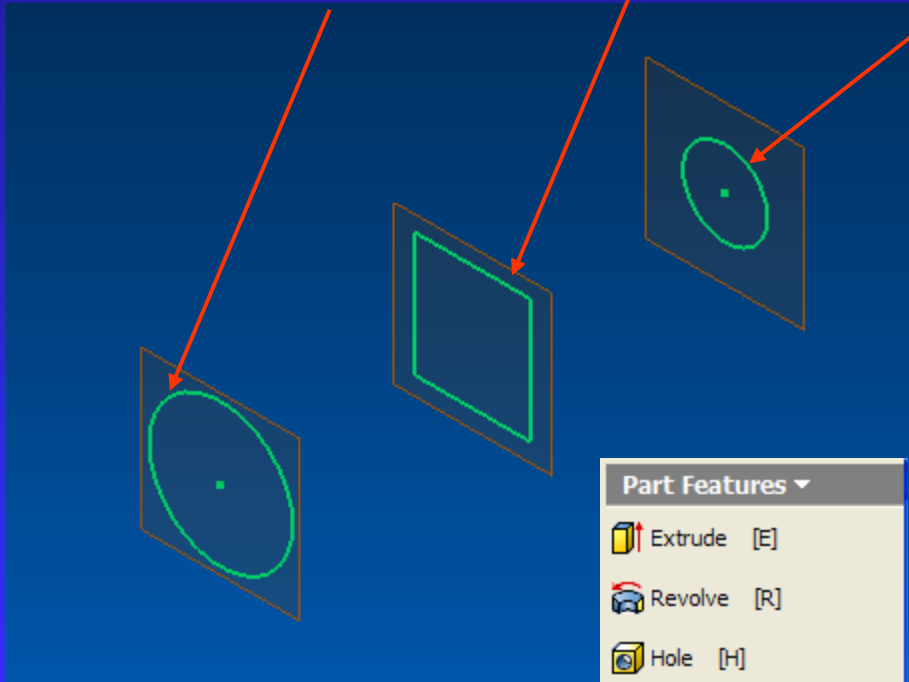
- There is no limit to the number of profiles
- Sections (profiles) do not have to be sketched on parallel planes
- All sections must be either closed or open

Rails

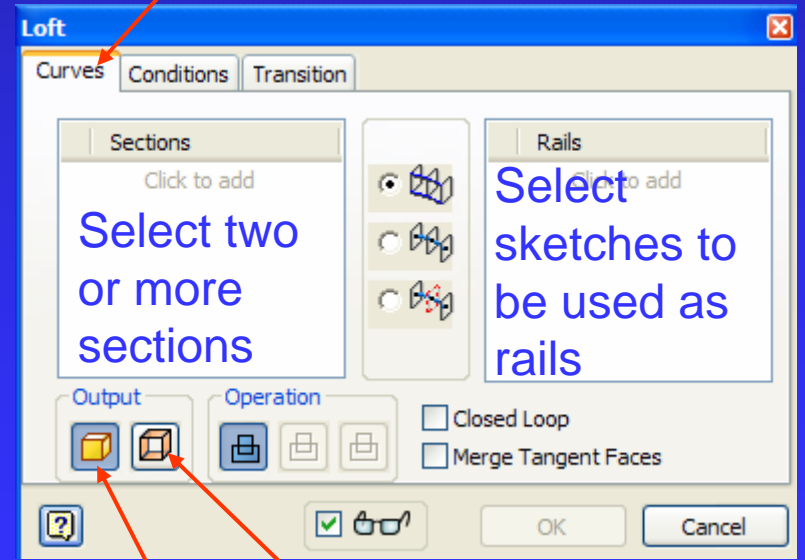
- There is no limit to the number of rails
- All rail curves must be either all open or all closed
- Rail curves must not cross each other, and no two rails can have identical guide points
- Rails can extend beyond the first and last sections, the extension is ignored

Loft Command

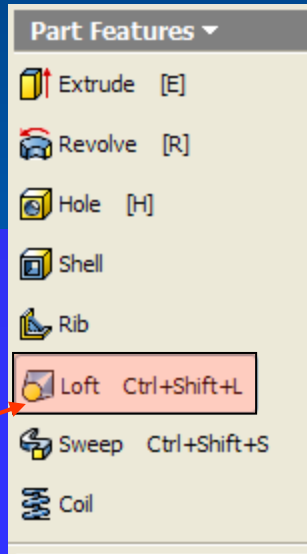
1. Select a principal plane (XY) and sketch the first profile
2. Create a work plane and sketch the second profile.
3. Create another work plane and sketch the third profile.



Select **Curves** option



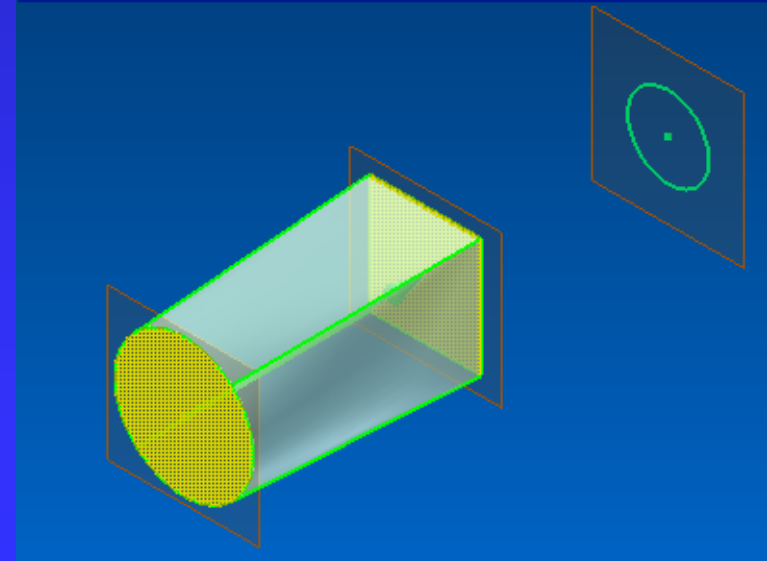
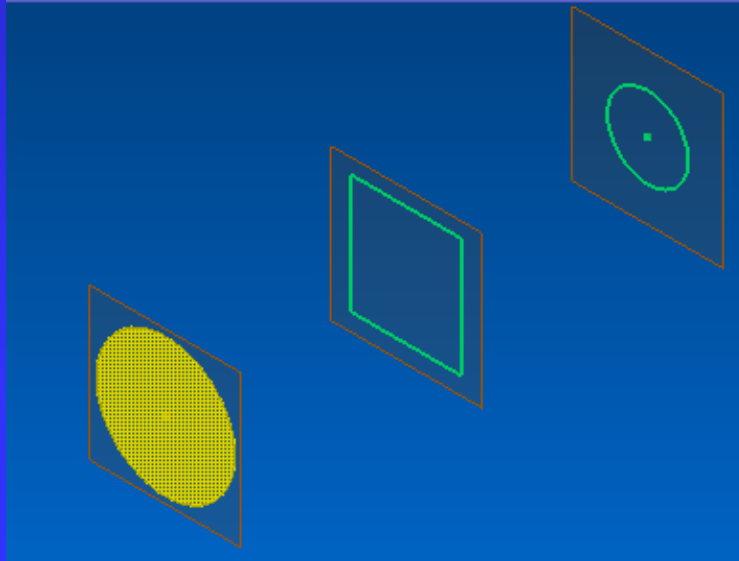
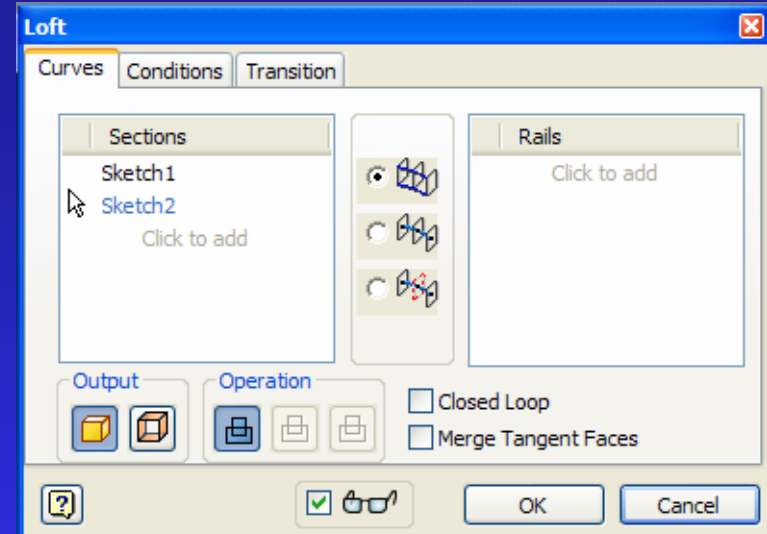
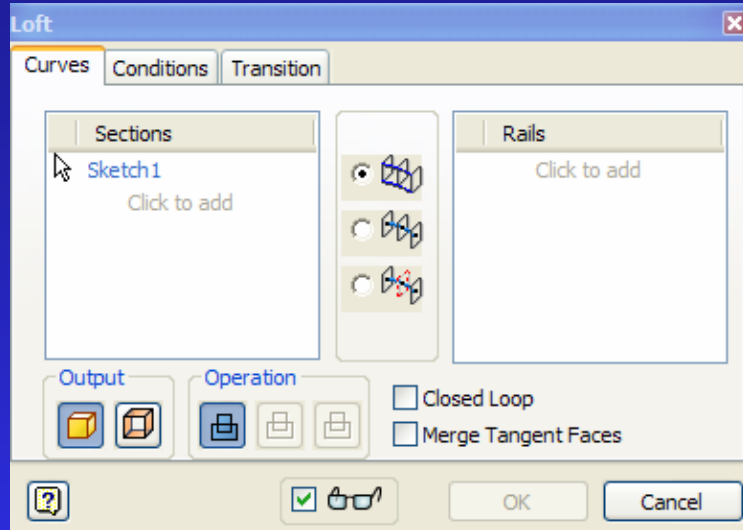
4. Select **Loft**



Loft Command

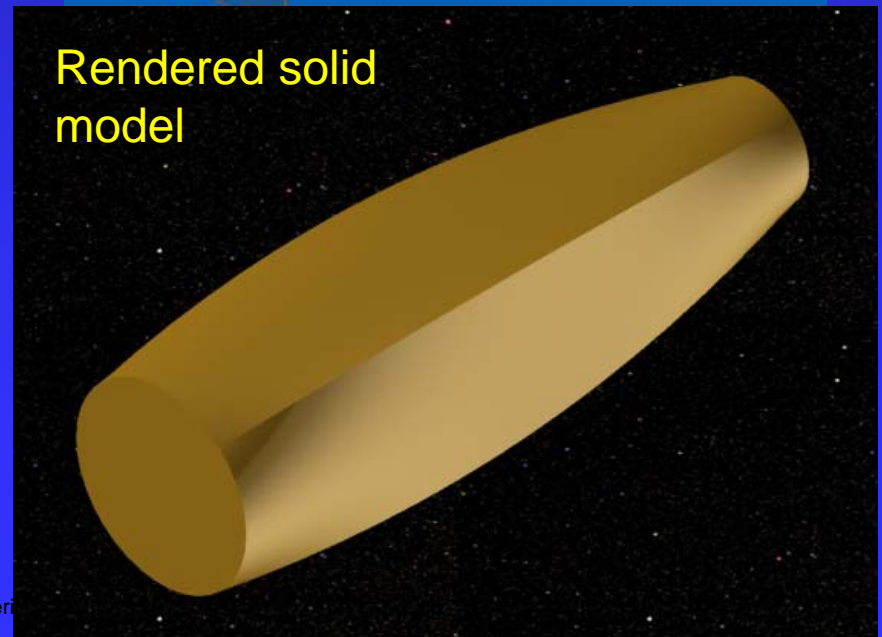
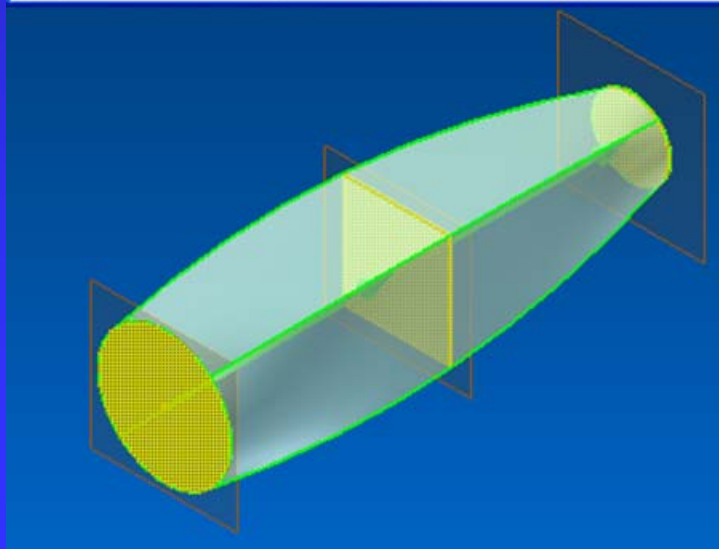
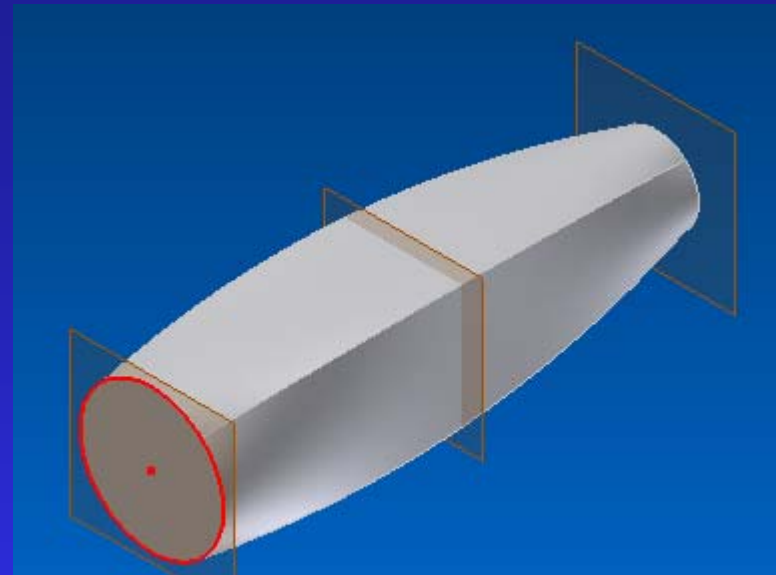
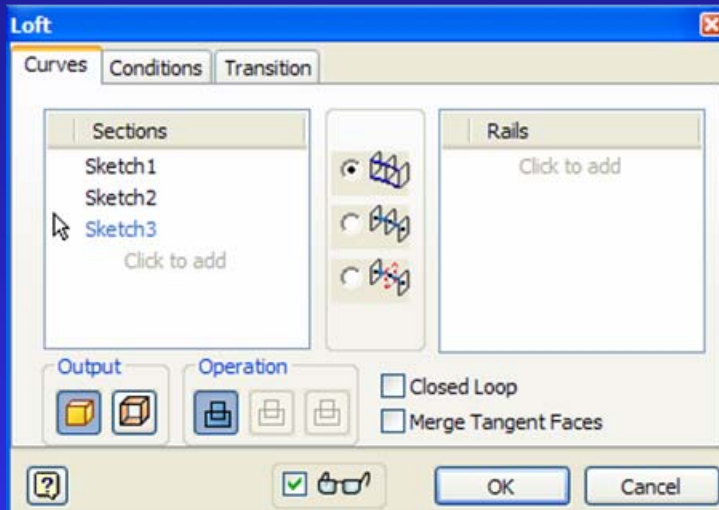
Select the first section (circle)

Select the second section (square)



Loft Command

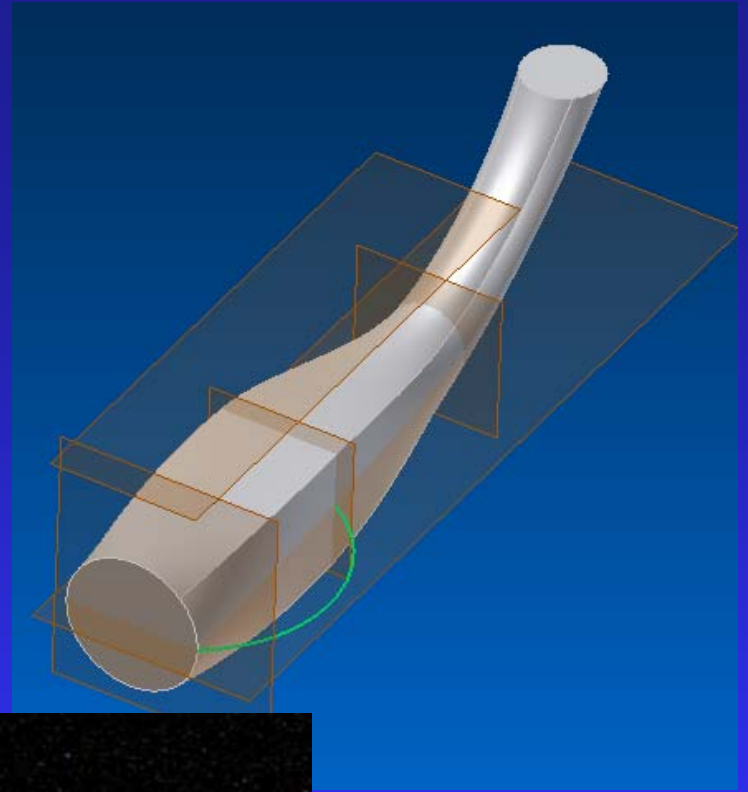
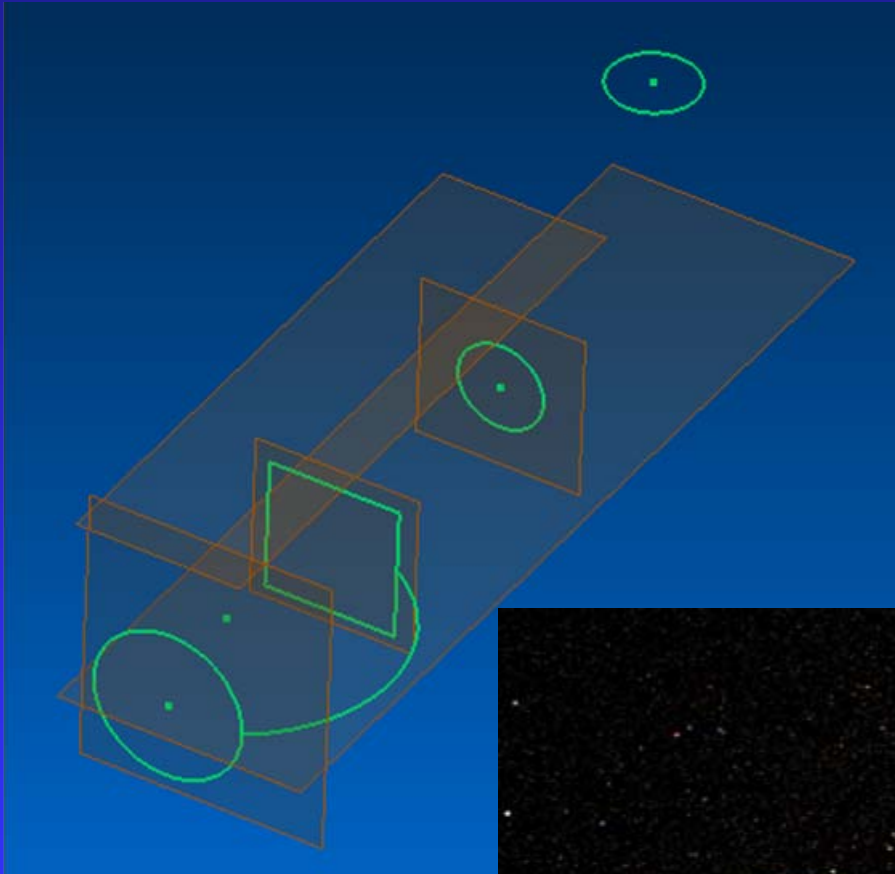
Select the third section (smaller circle)



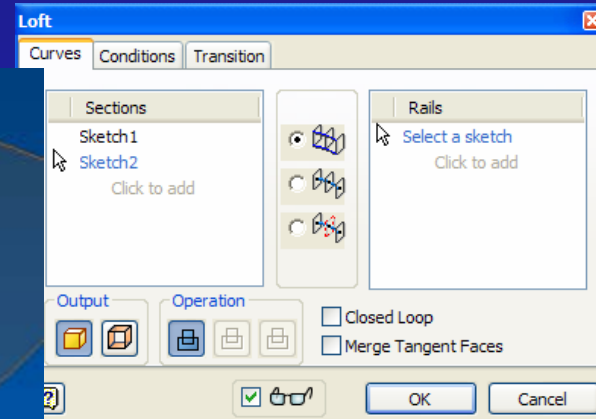
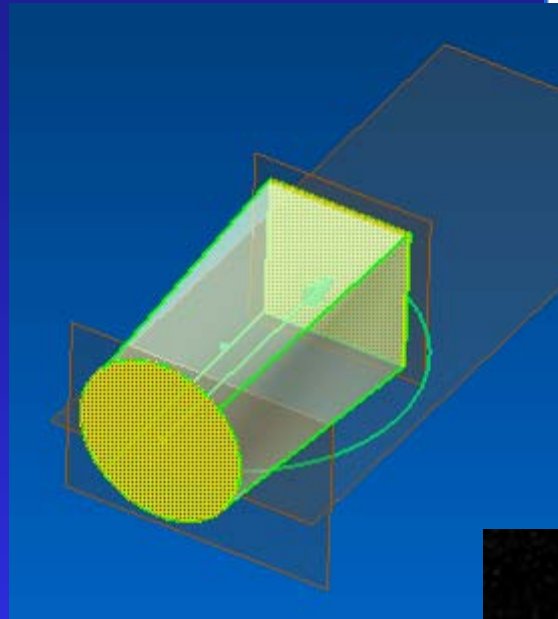
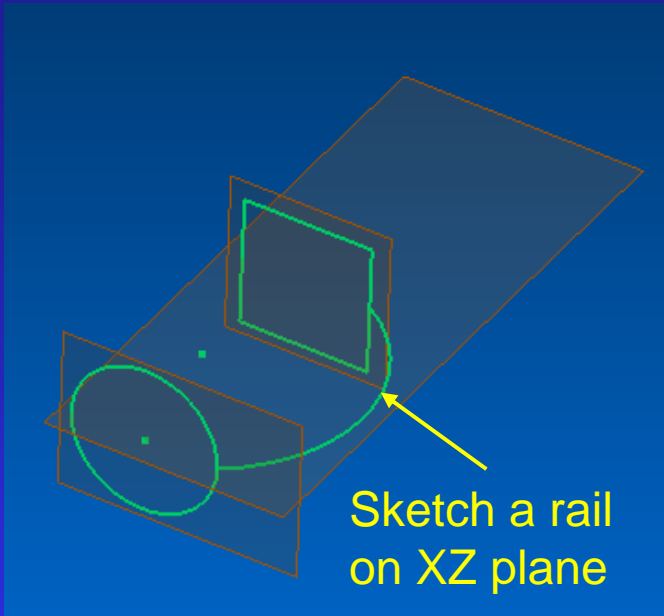
Rendered solid model

Loft Command

Four non-parallel sections, no rails



Loft Command – Using Rails



Select both sections,
specify **no rail**

Select both sections and the rail

