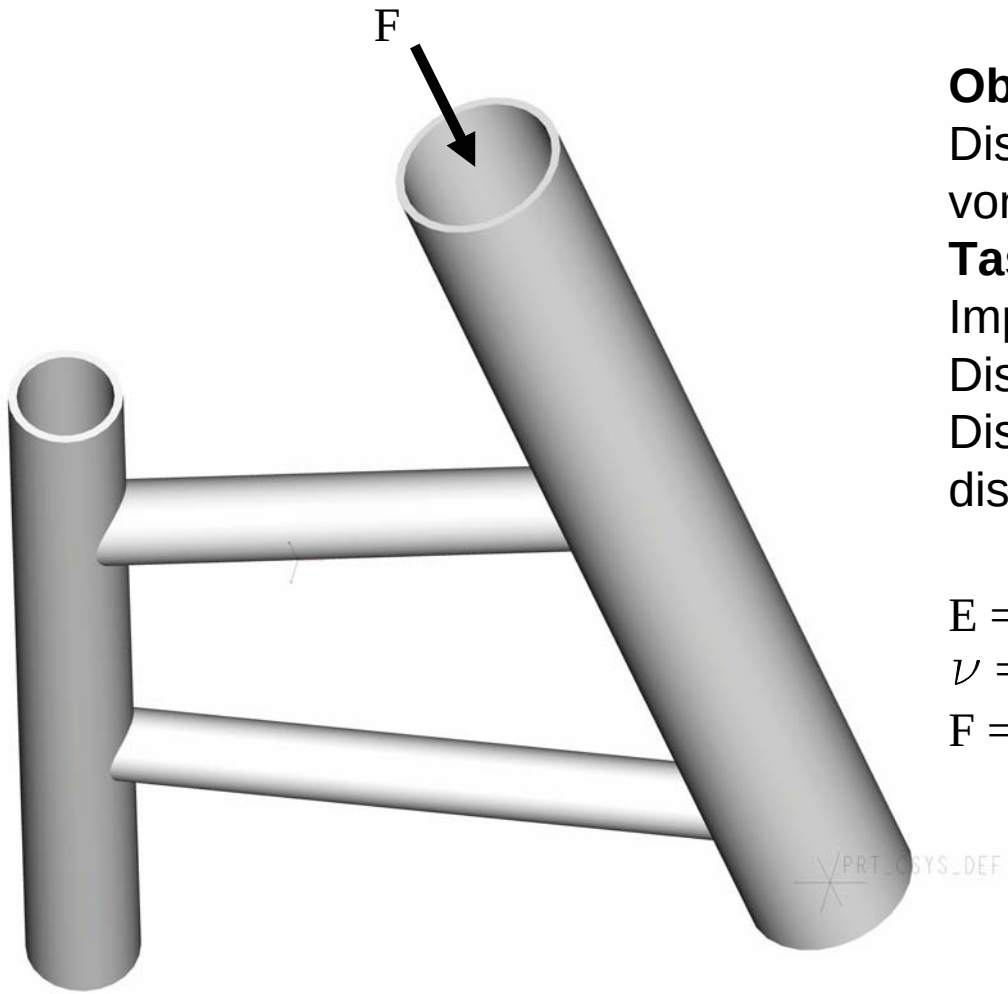
Course in ANSYS

Example0302

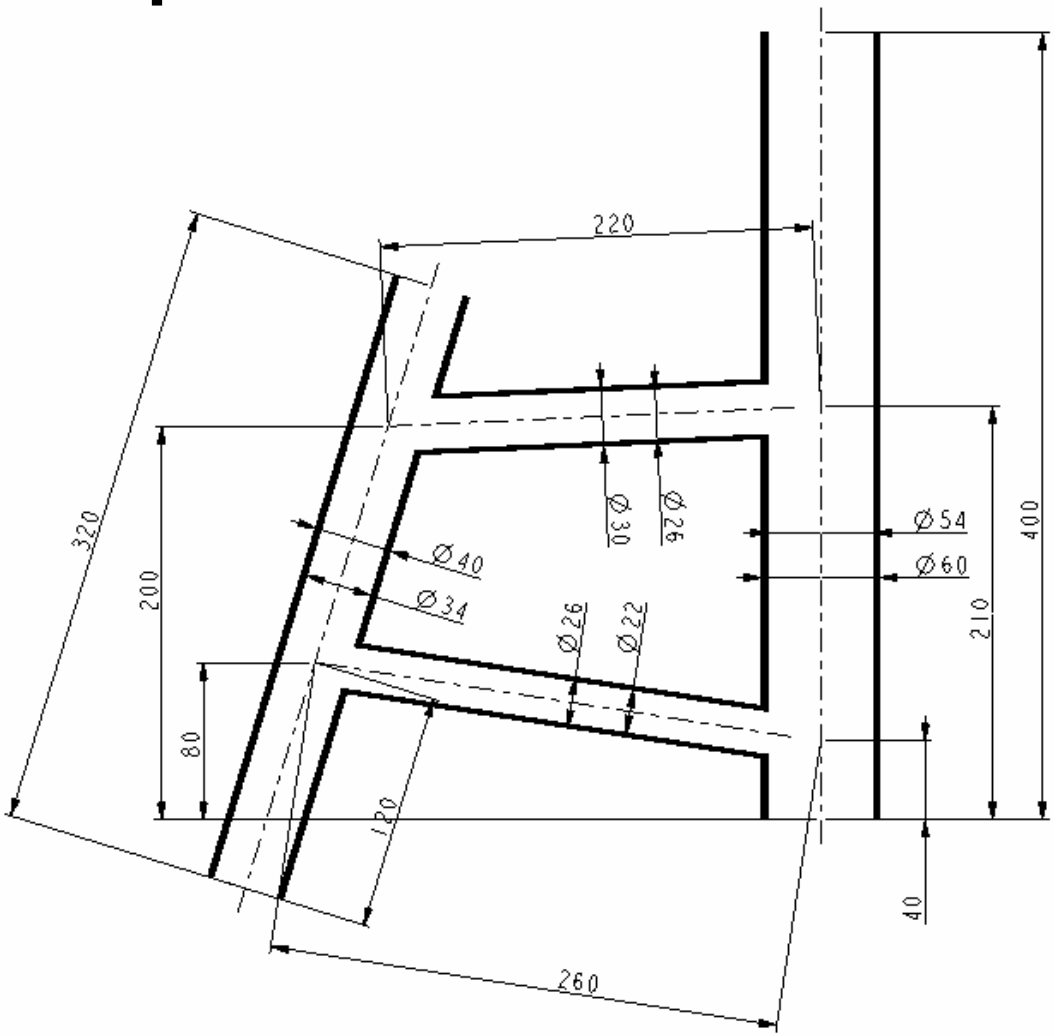
Example – Offshore structure



Objective:
Display the deflection figure and von Mises stress distribution
Tasks:
Import geometry from IGES.
Display the deflection figure?
Display the von Mises stress distribution?

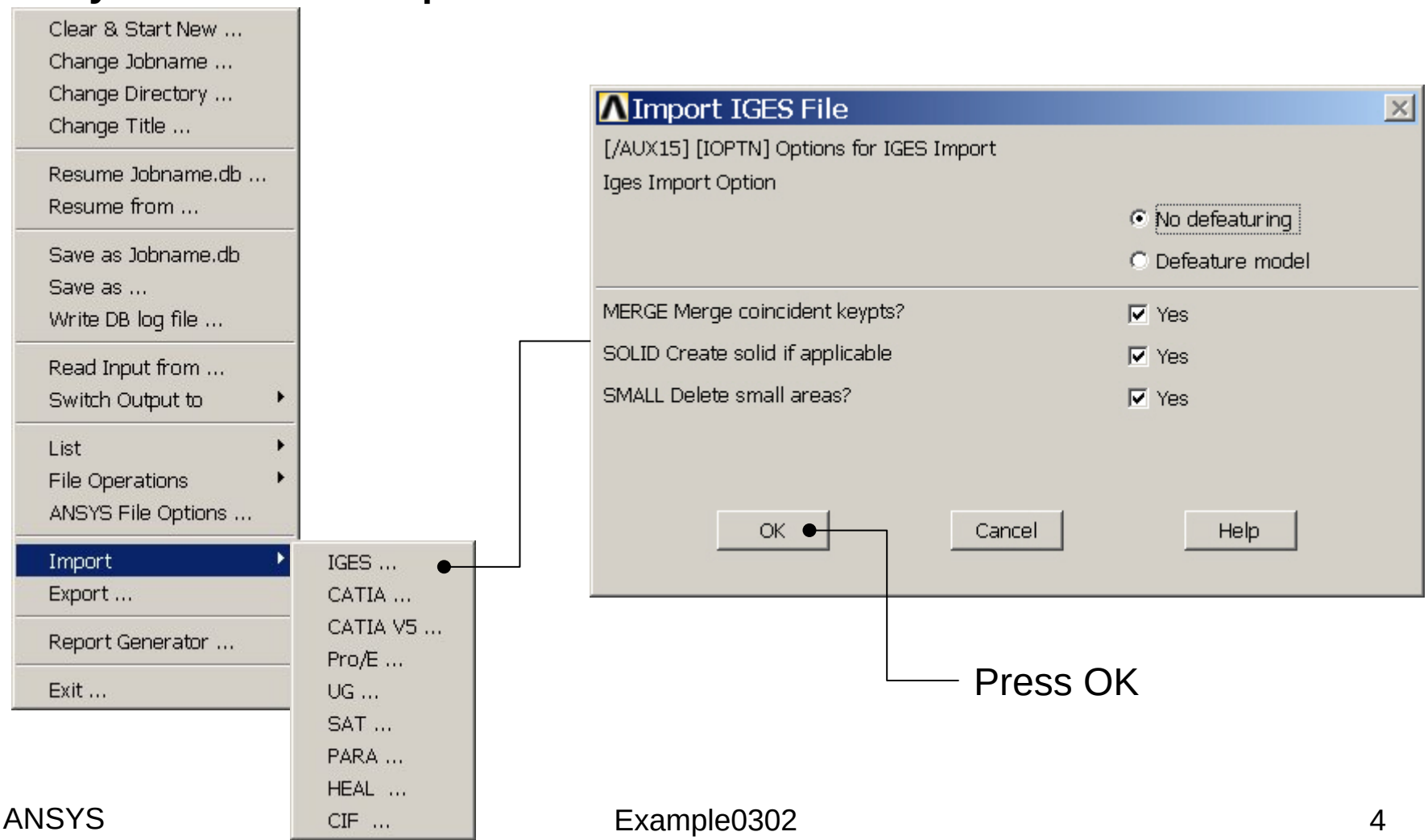
$E = 210000 N/mm^2$
$\nu = 0.3$
$F = -10000$

Example – Offshore structure

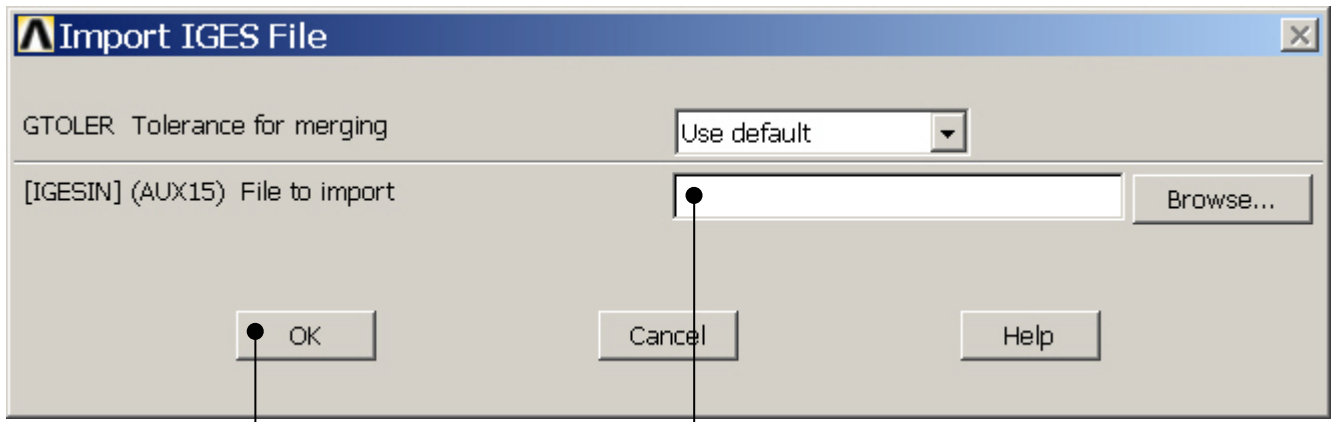


Example – Import IGES

Utility Menu > File > Import > IGES

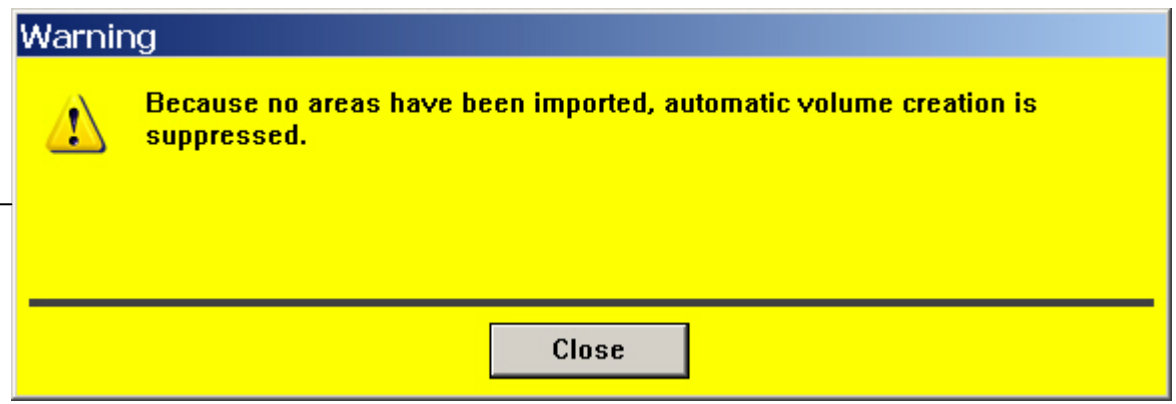


Example – Import IGES

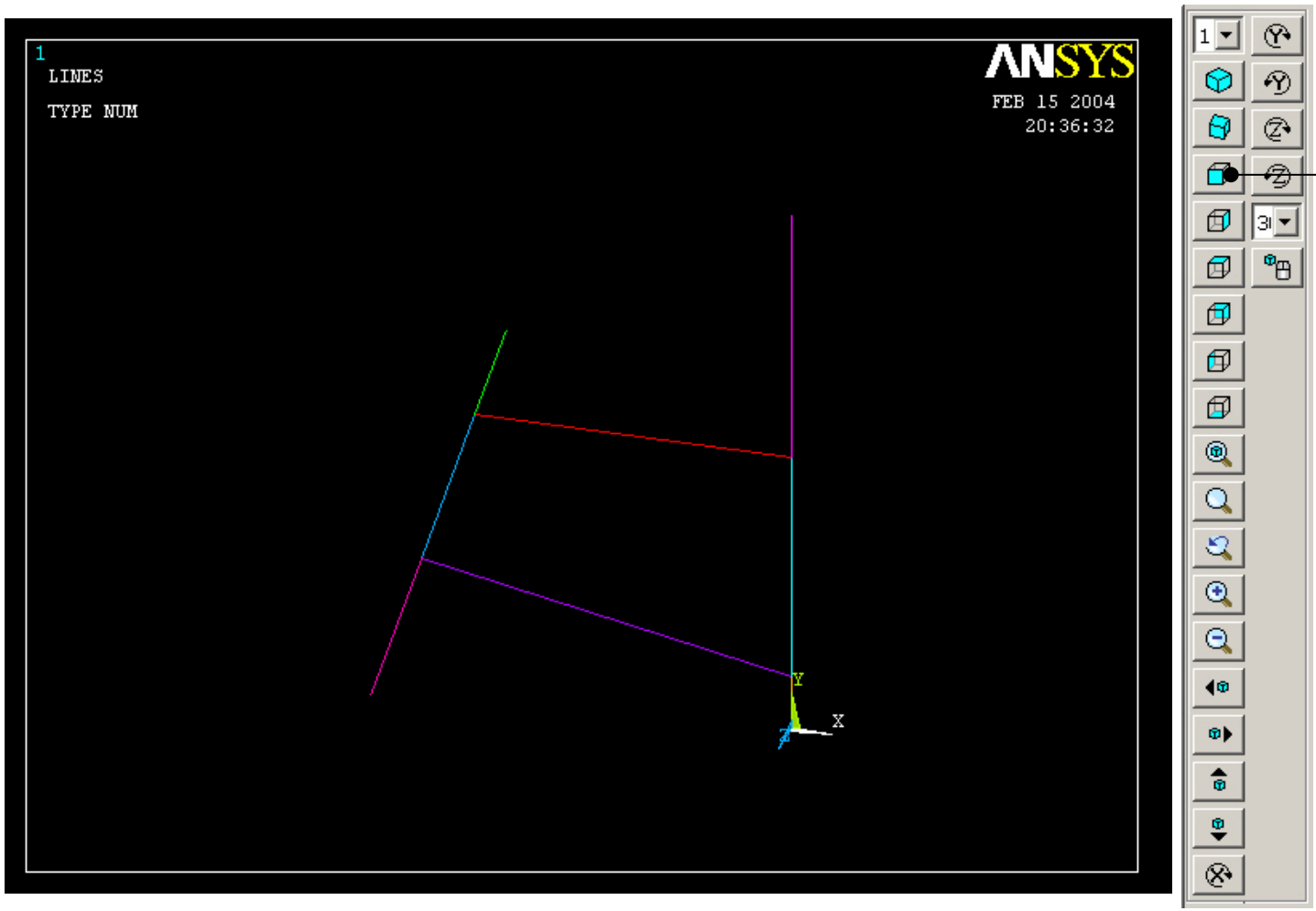


Browse to find offshore-structure-skeleton.igs

Press OK

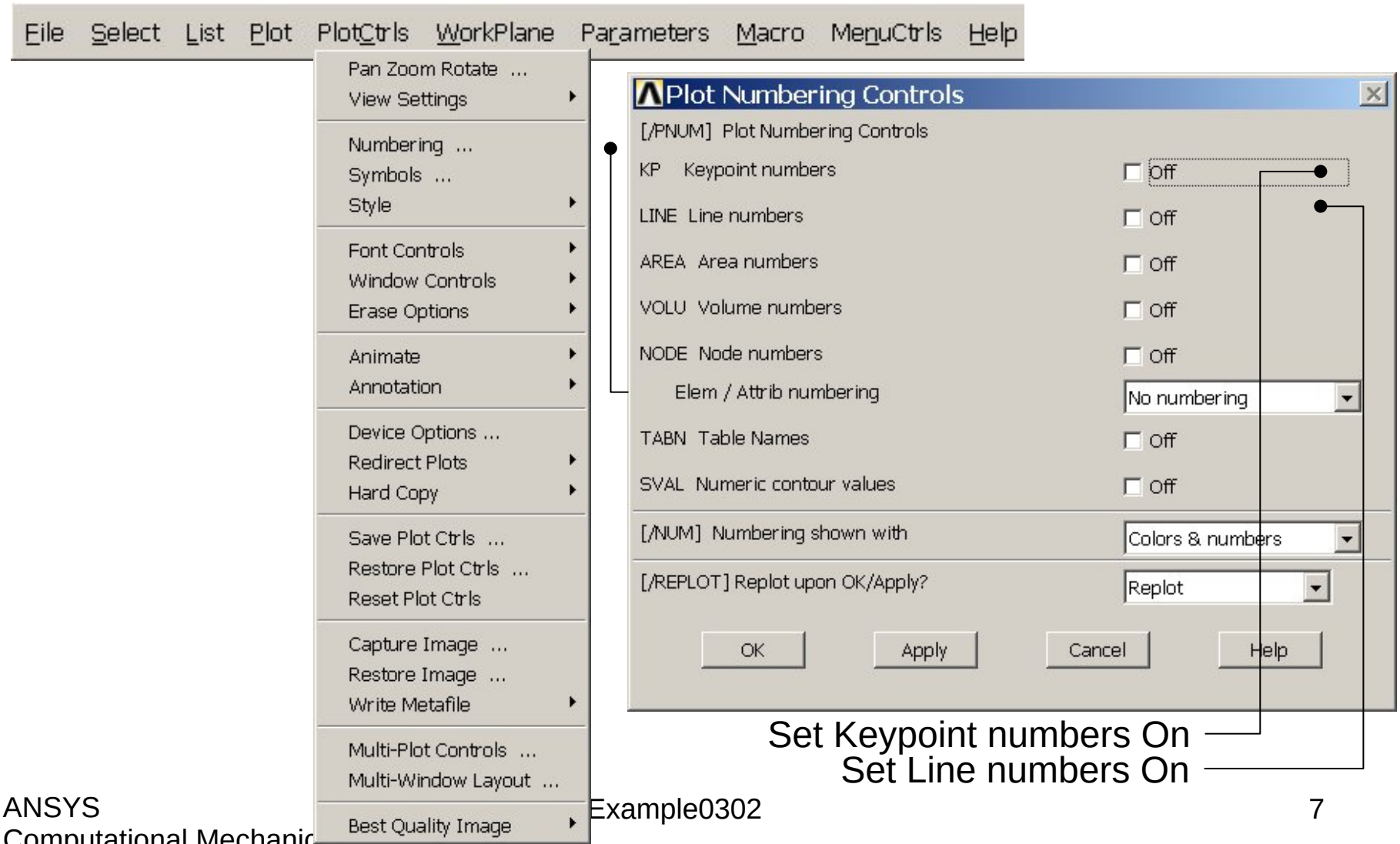


Example - Display

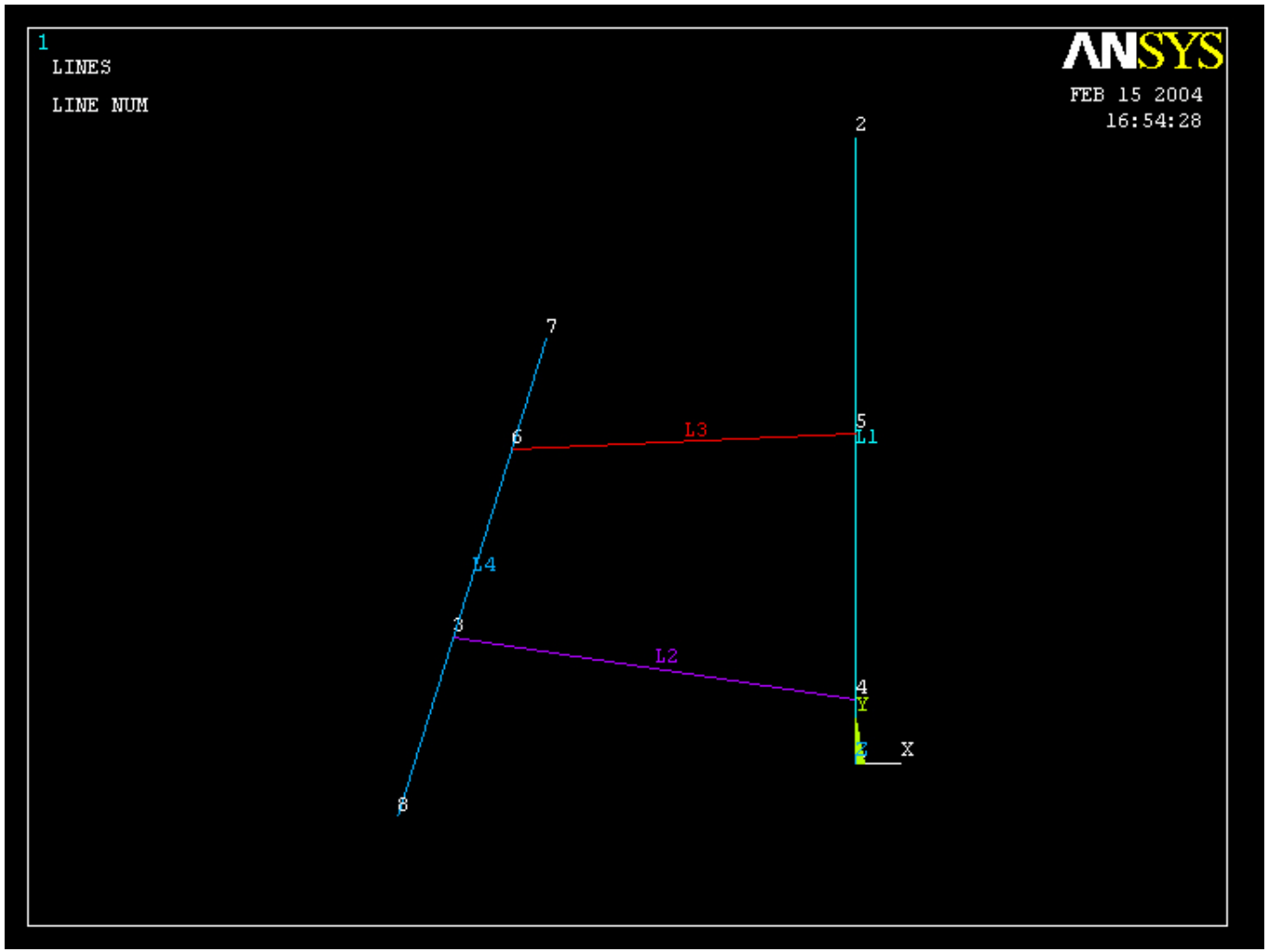


Select
Front View

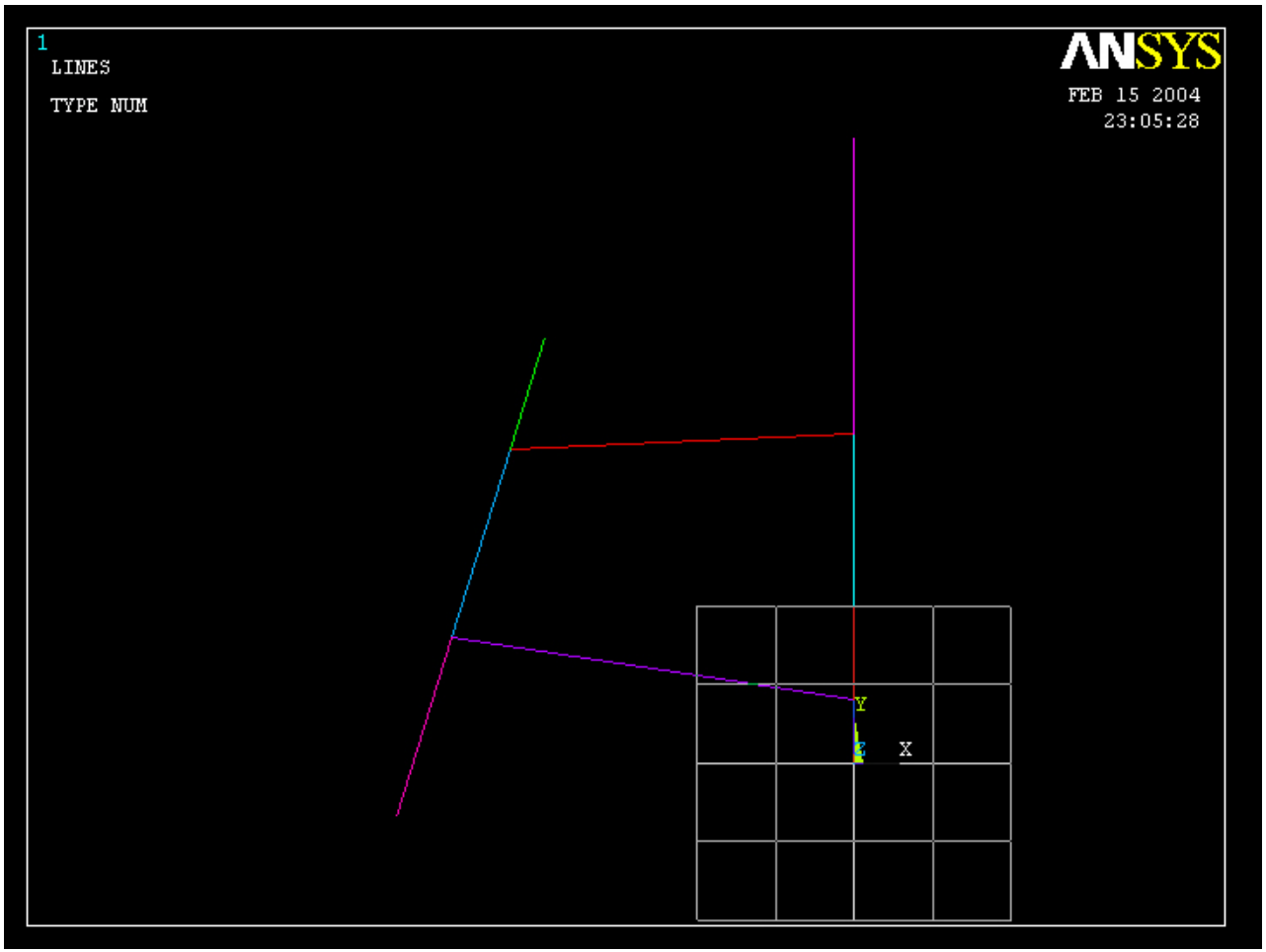
Example - Numbering

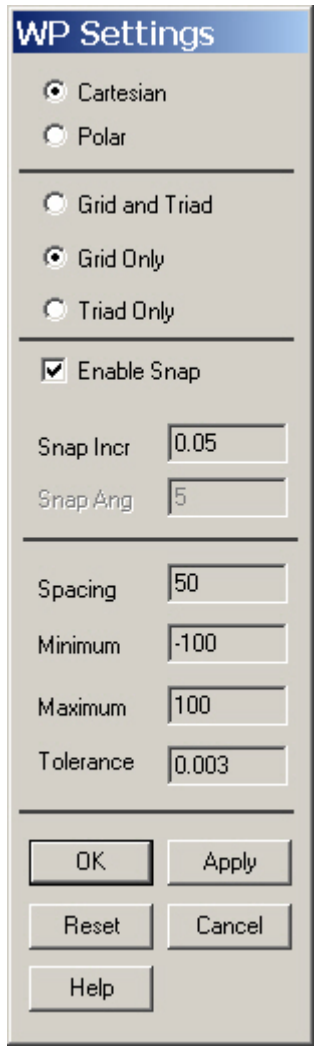


Example - Numbering

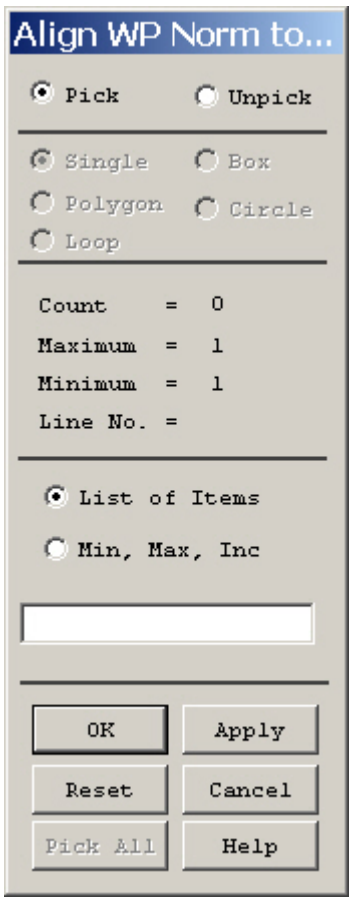


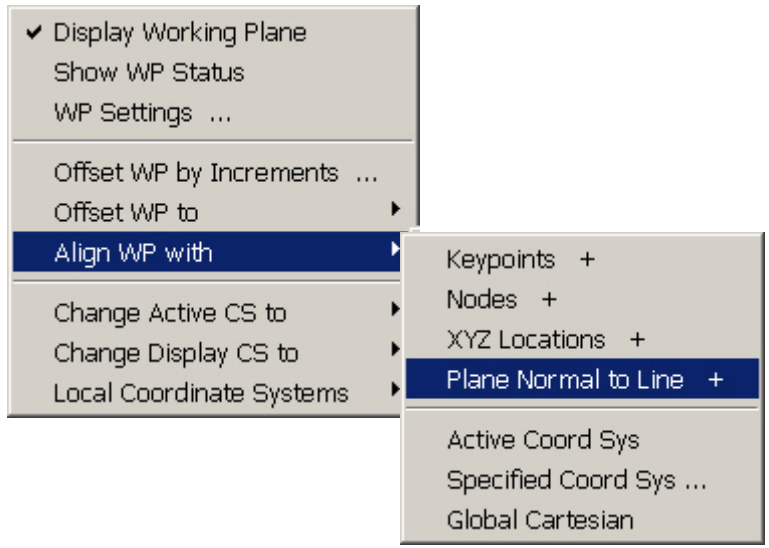
Example – WP Settings

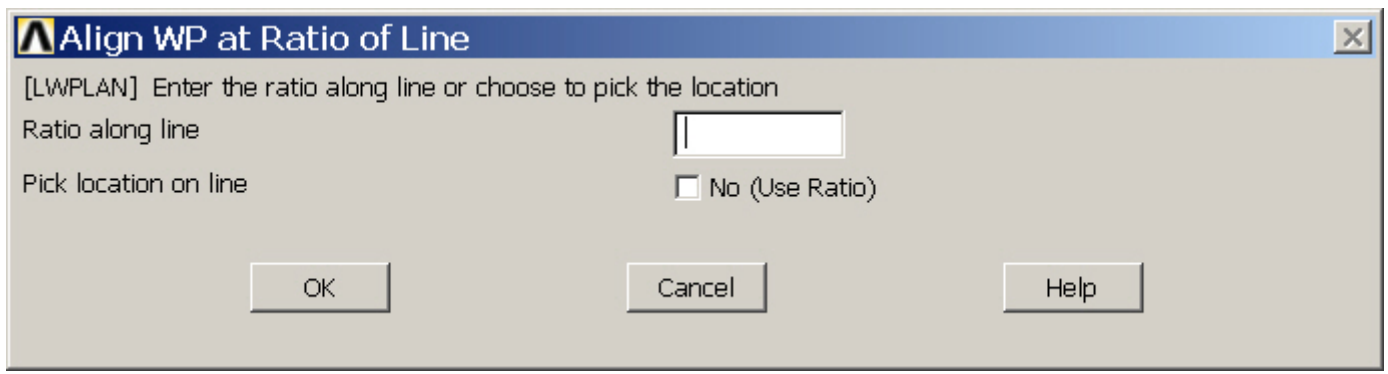




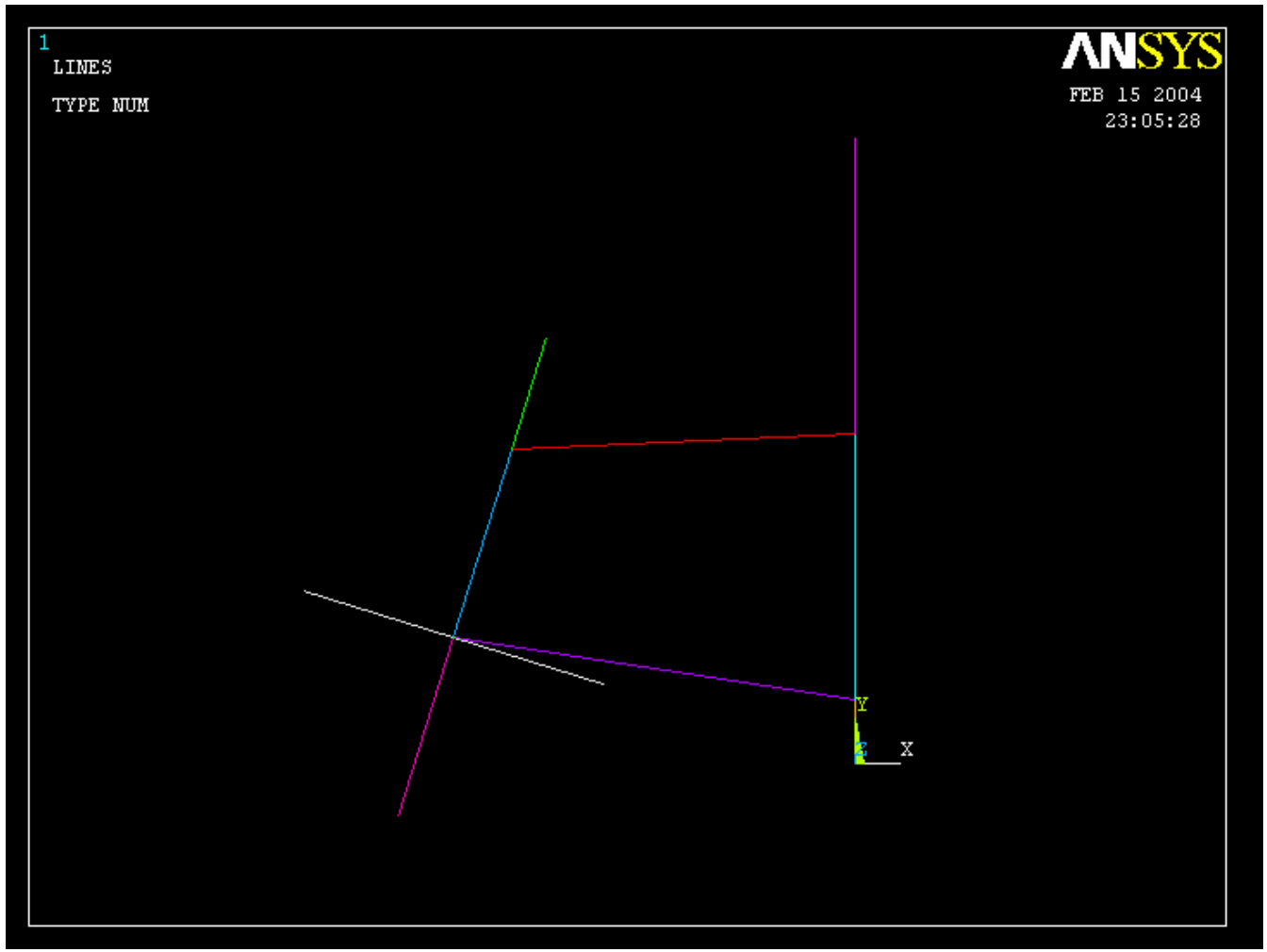
Example – Align WP with



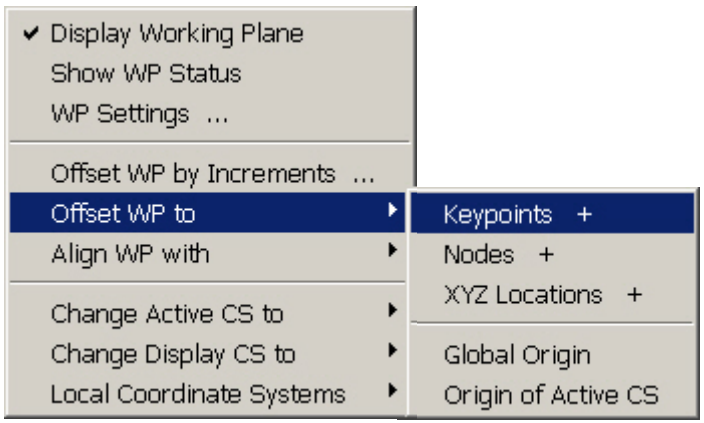


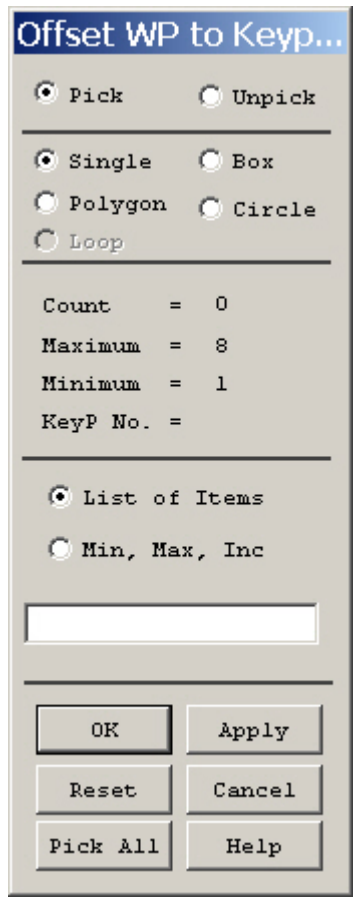


Example – Align WP with

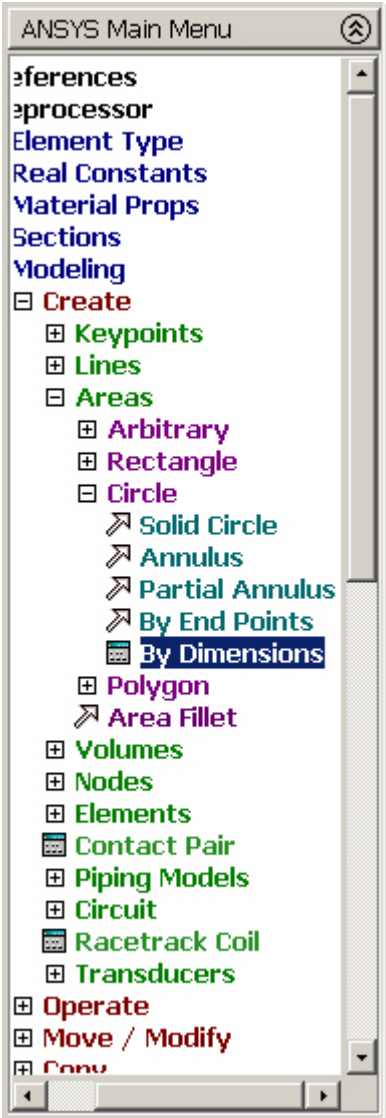


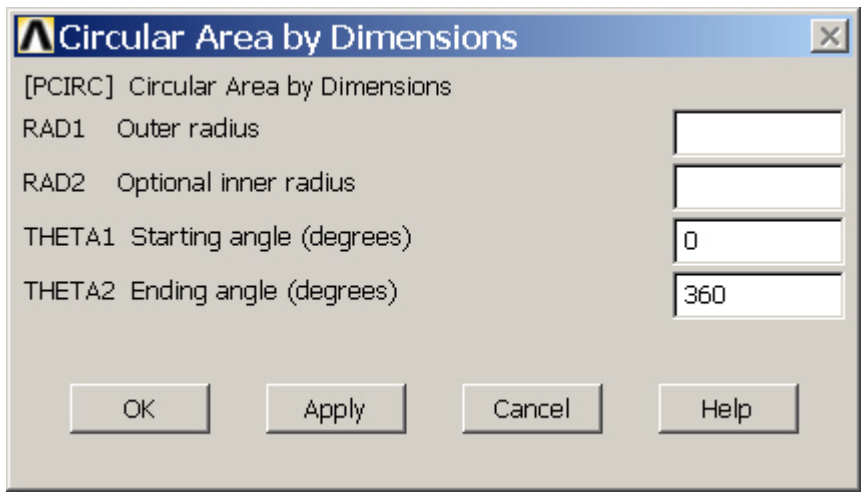
Example – Offset WP to





Example – Circular Area by Dimensions





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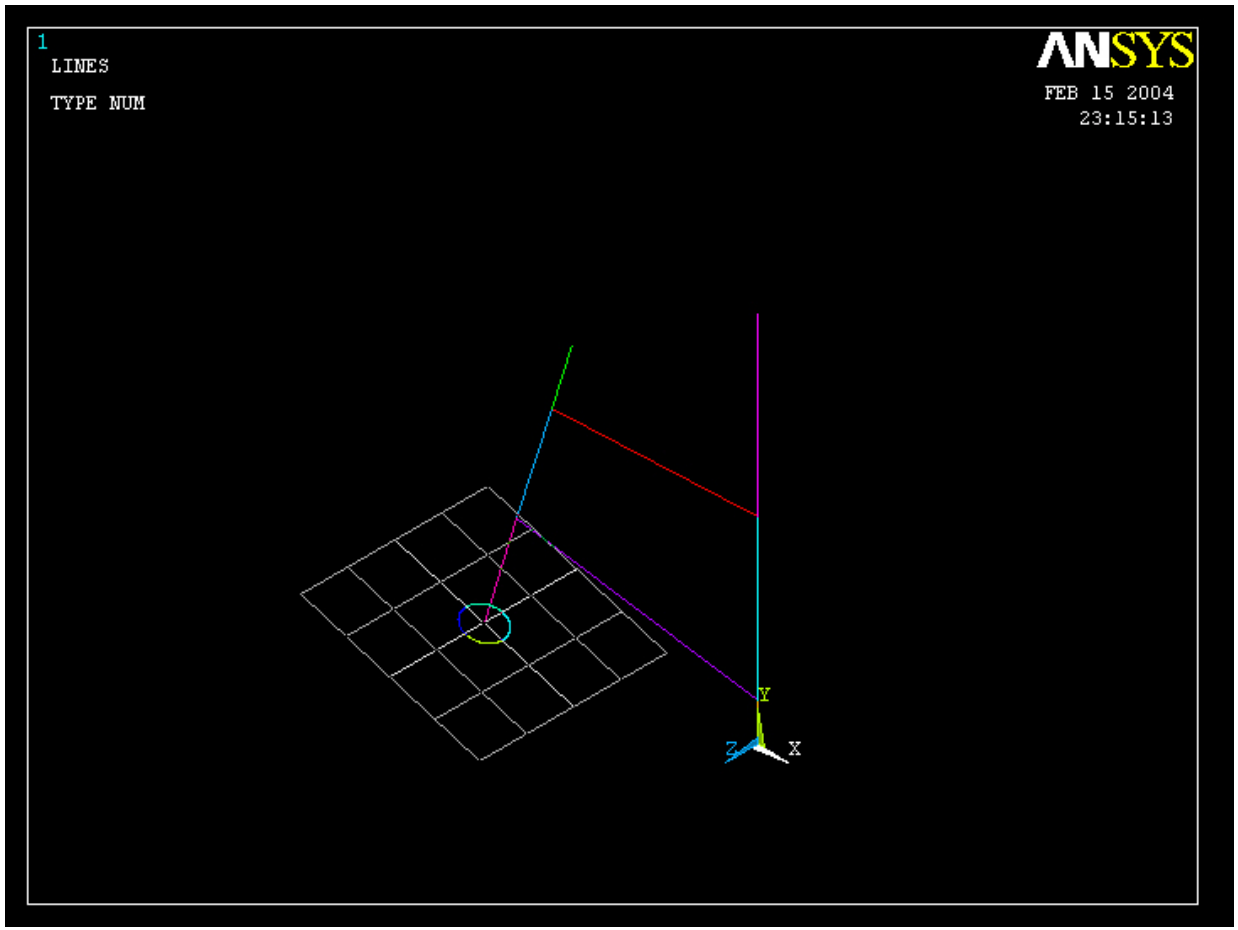
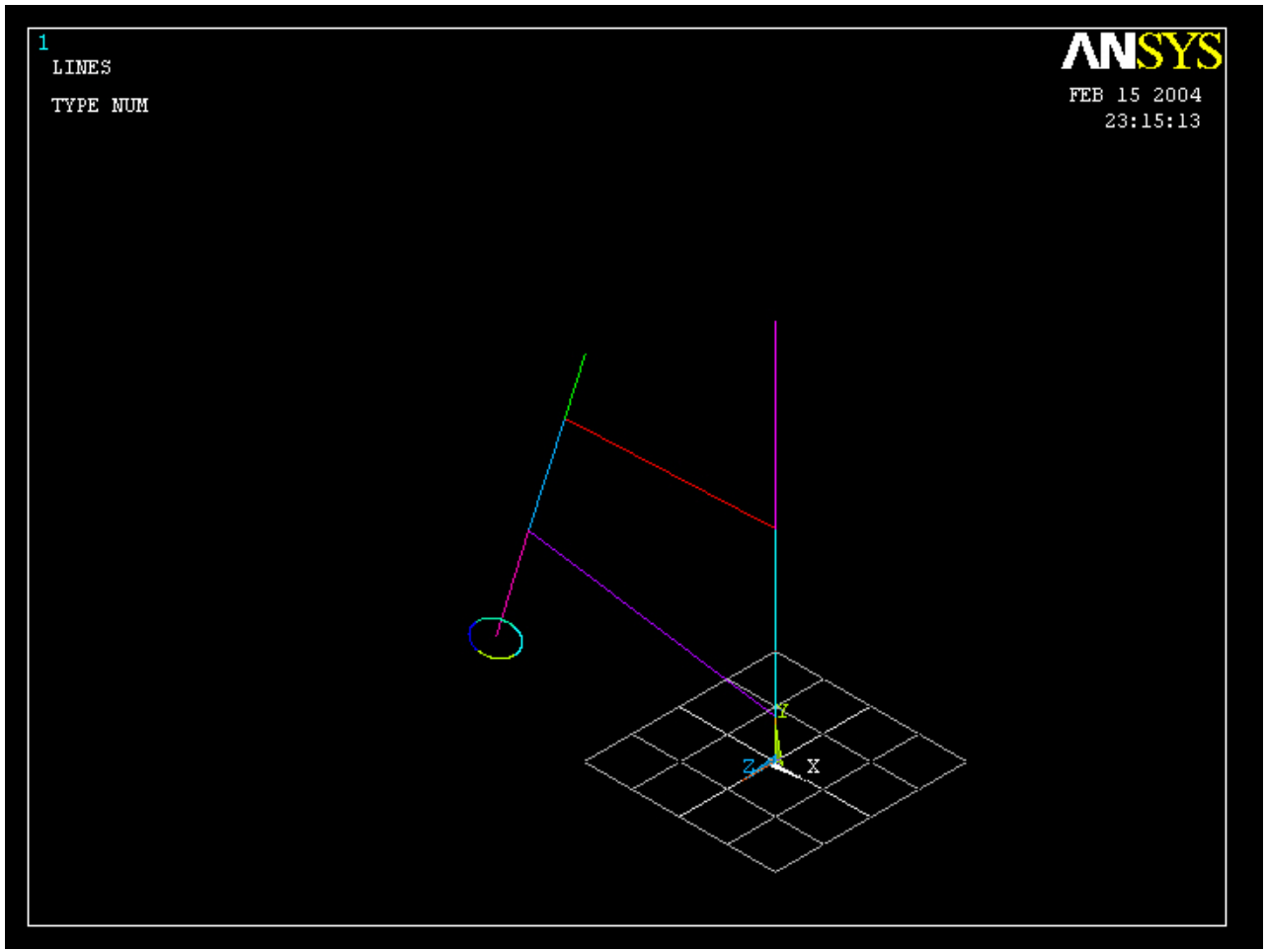


Example – Circular Area by Dimensions



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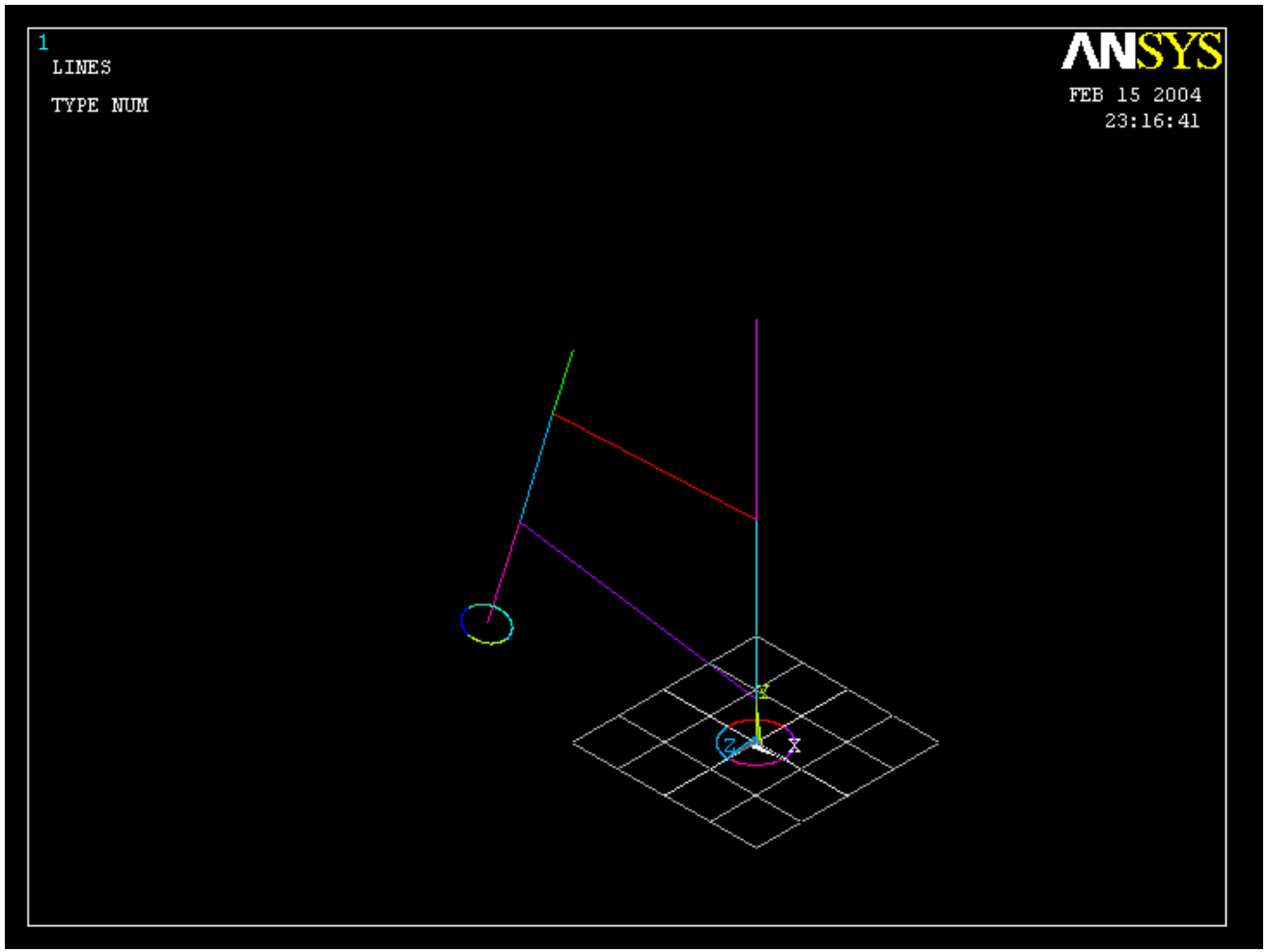

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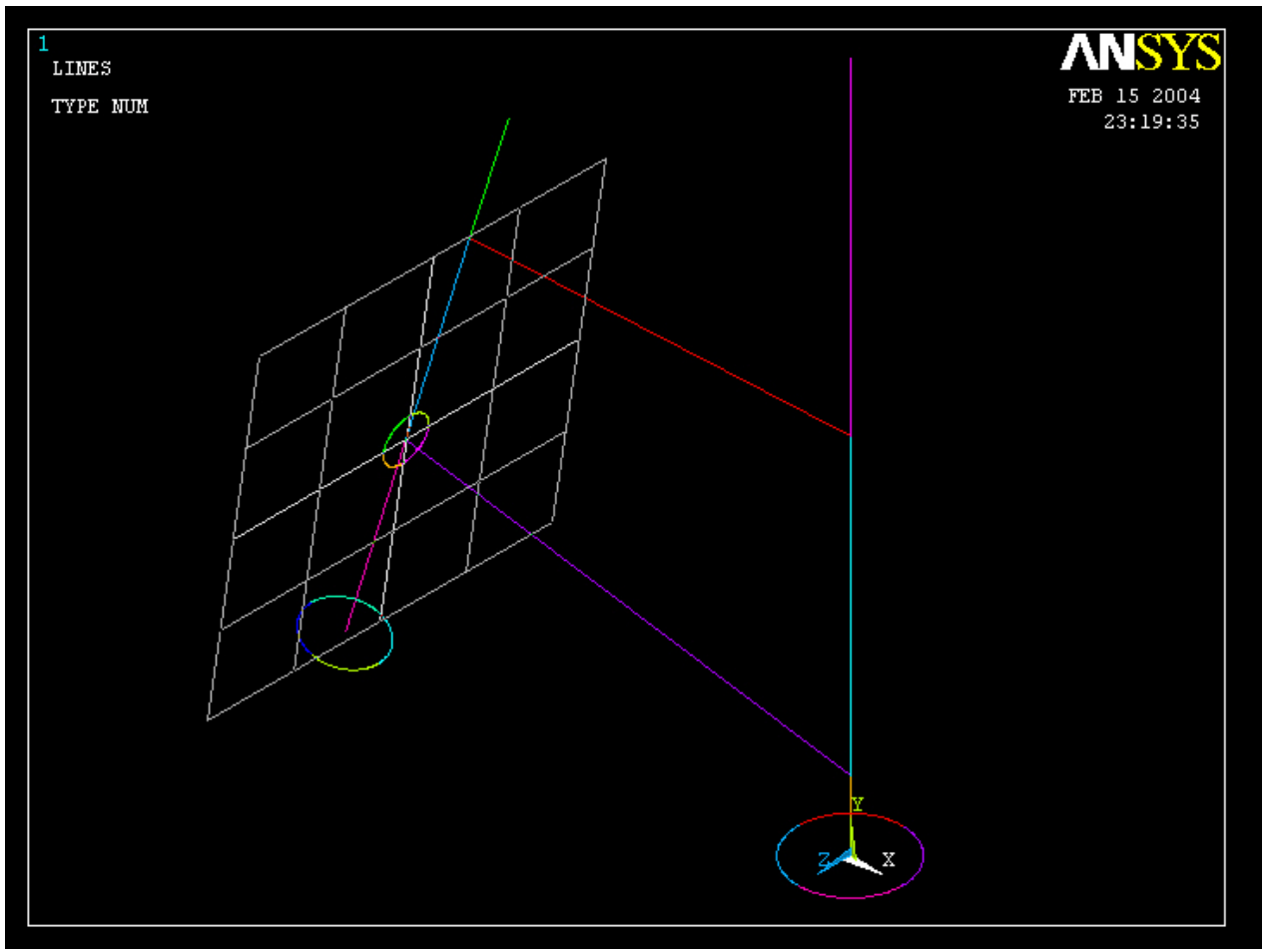

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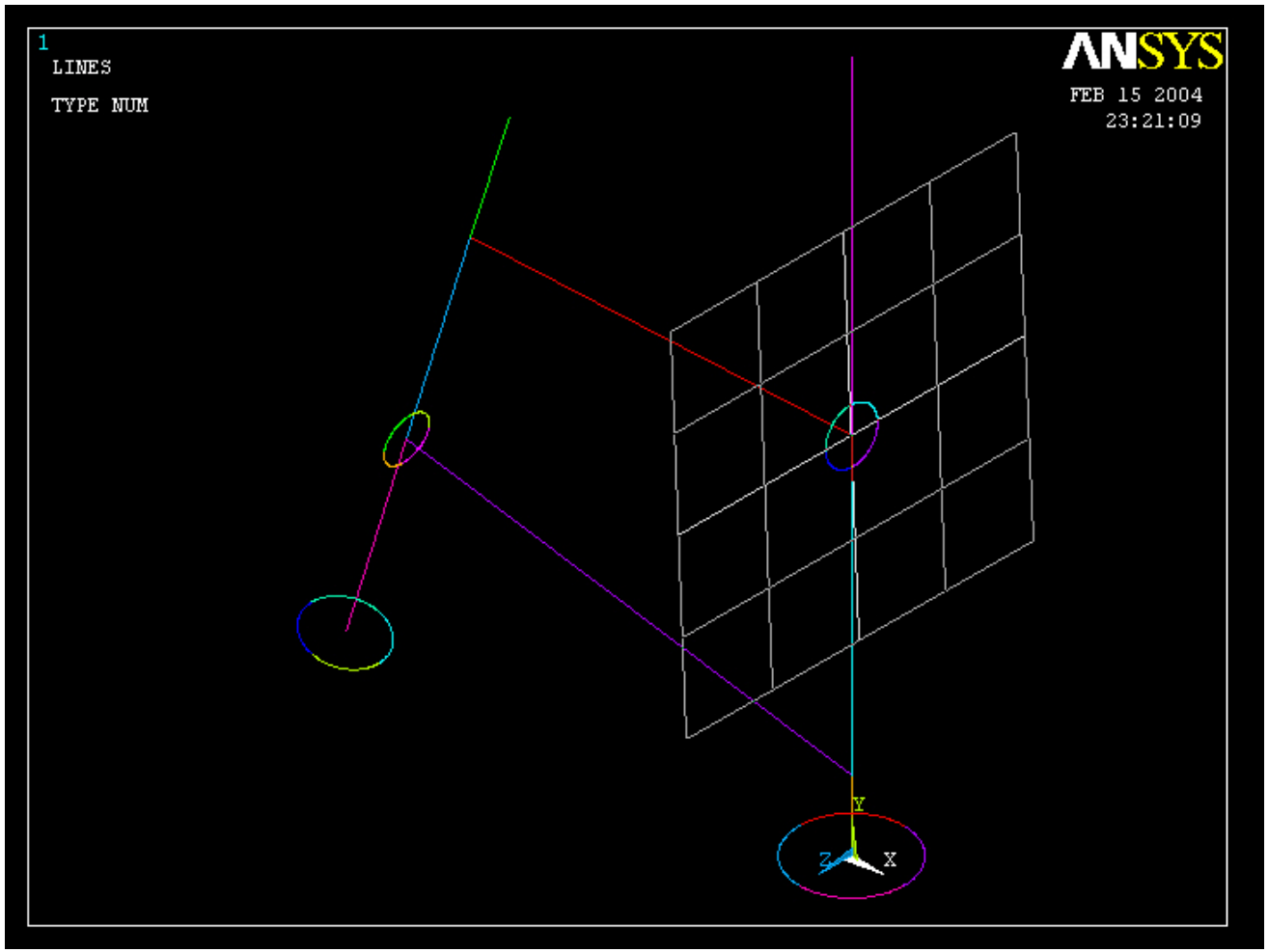
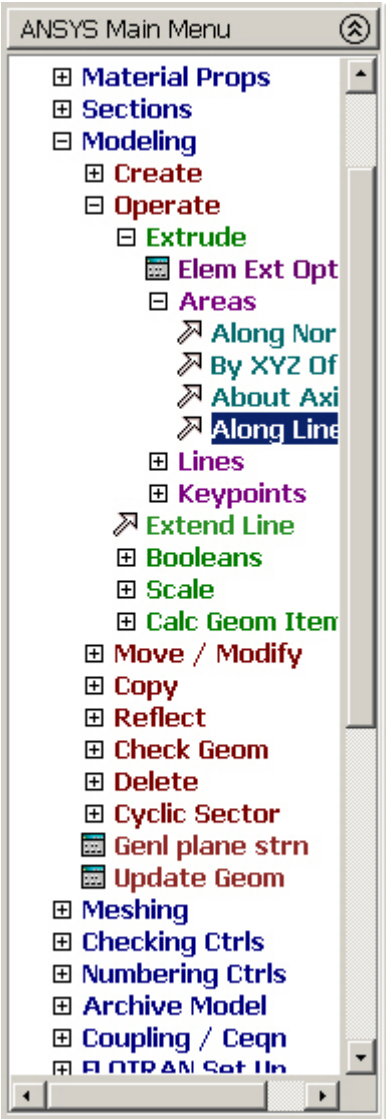
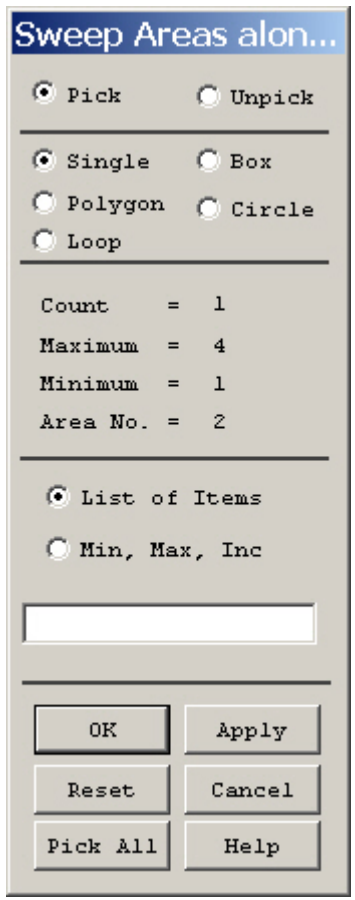
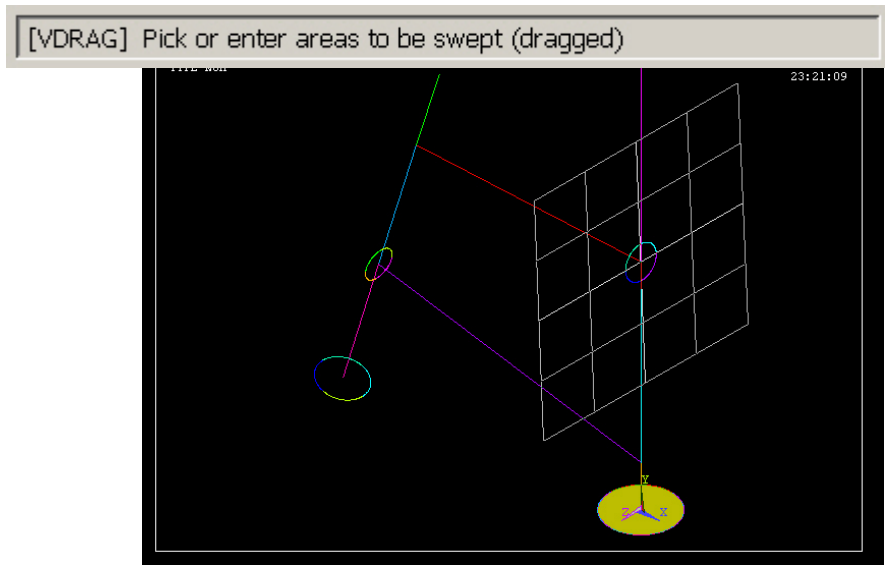


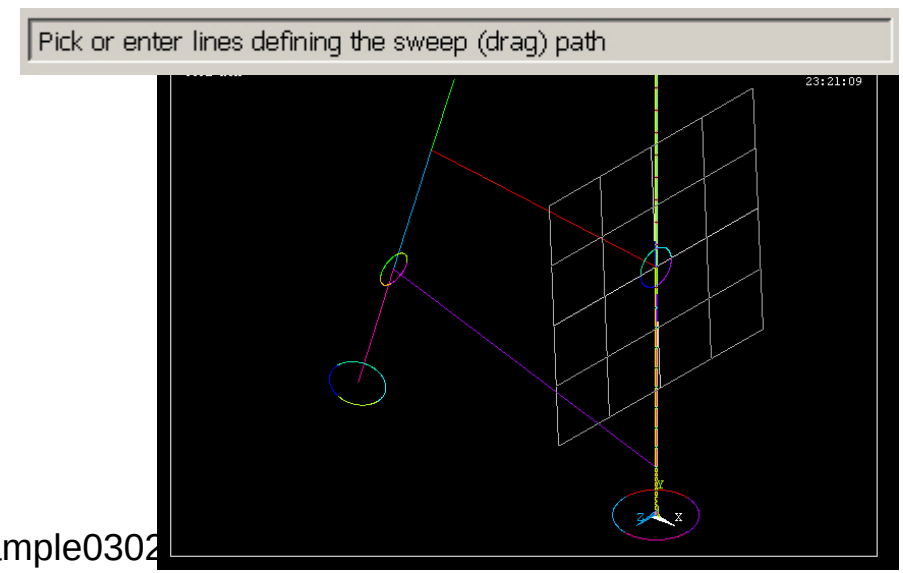
Example – Circular Area by Dimensions

Example – Extrude



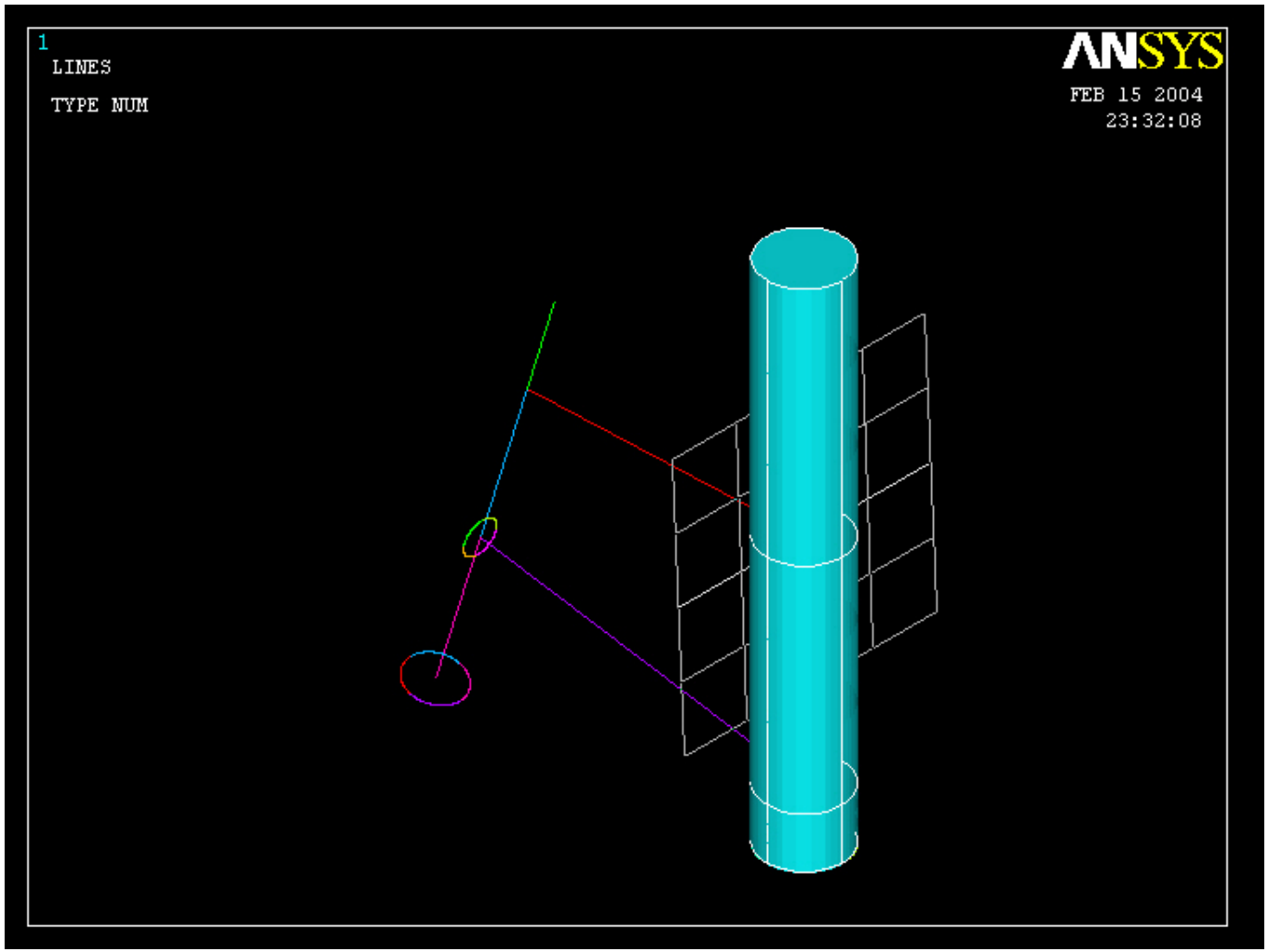




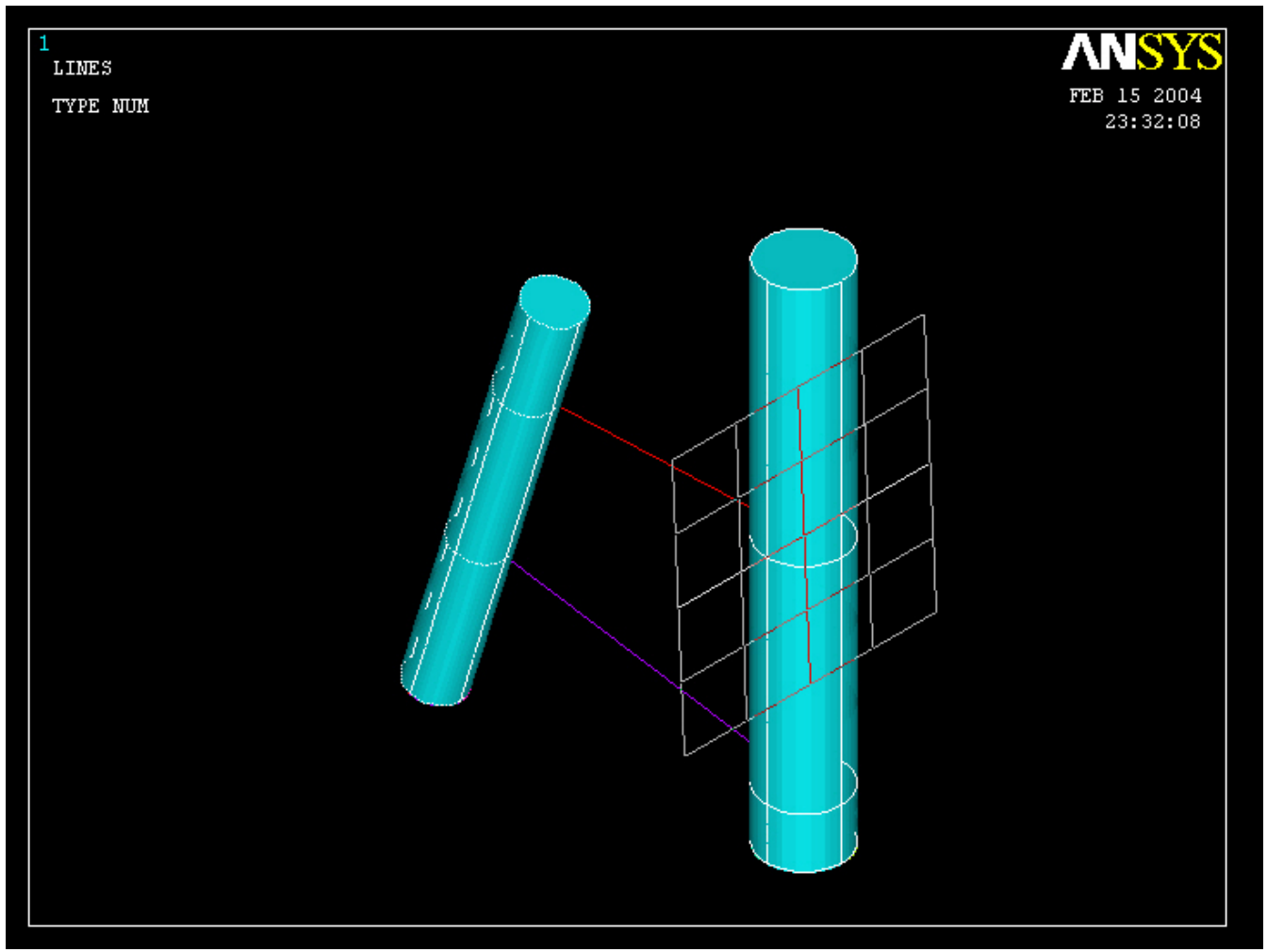


Example0302

Example – Extrude



Example – Extrude



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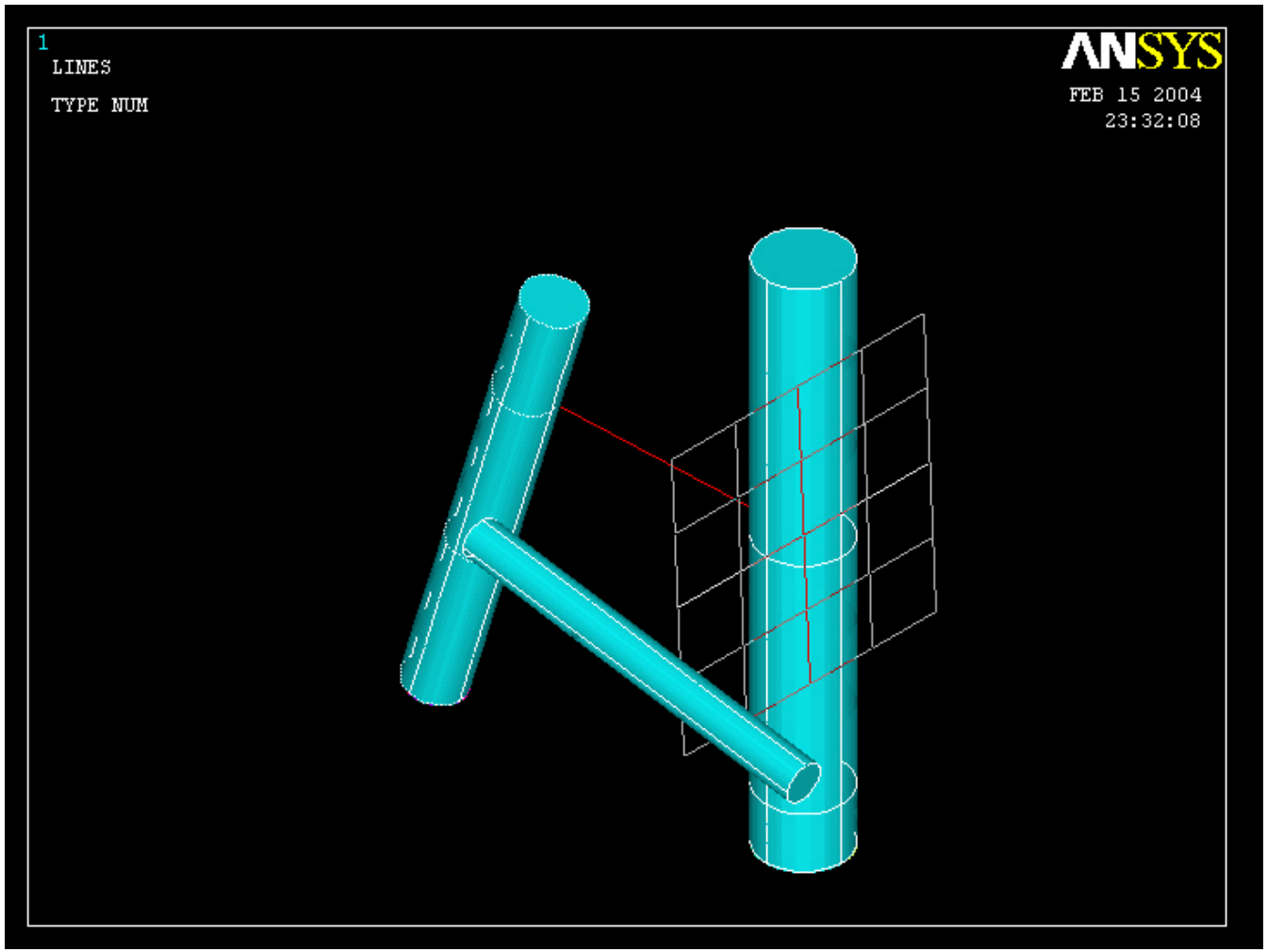
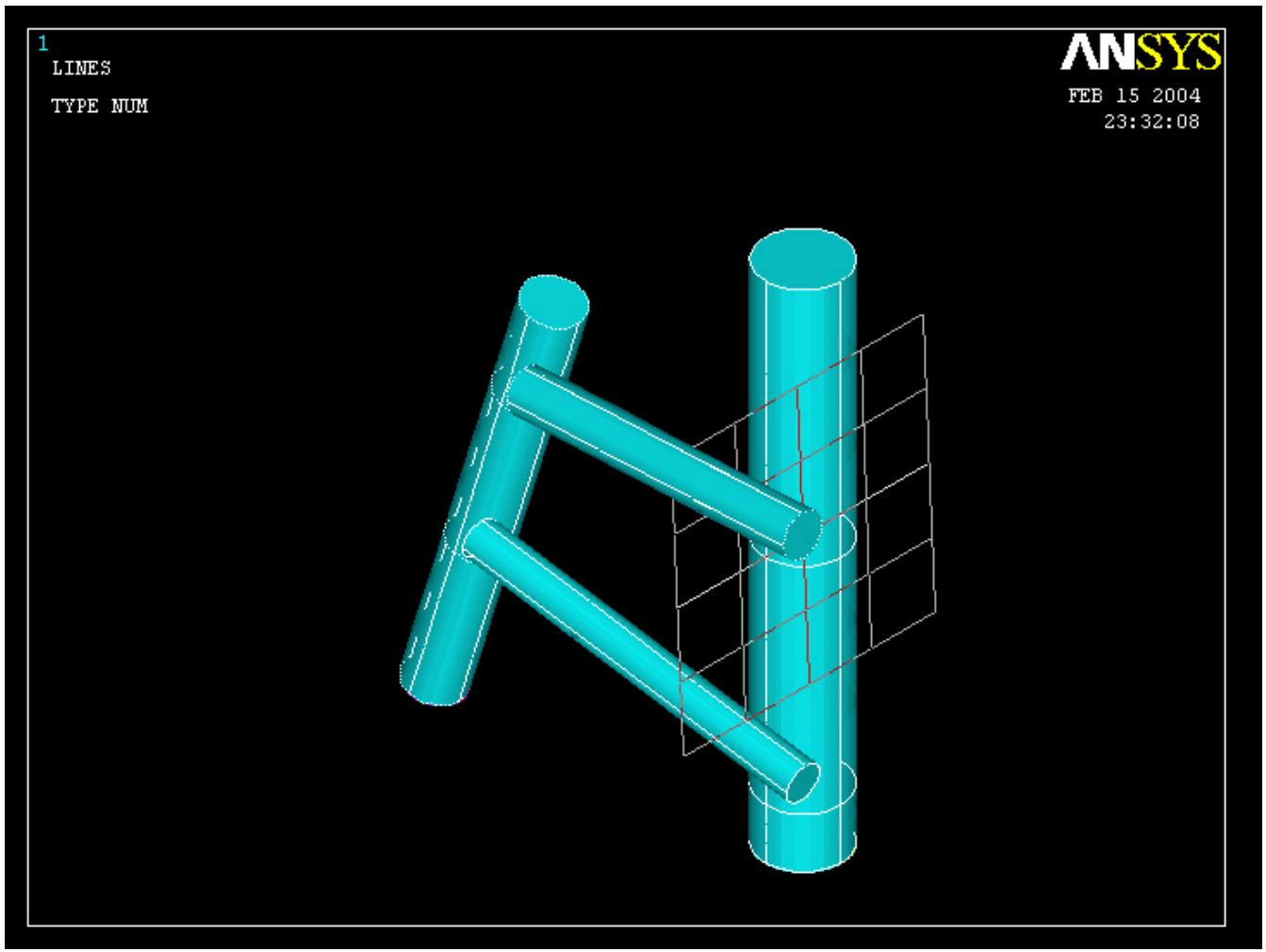
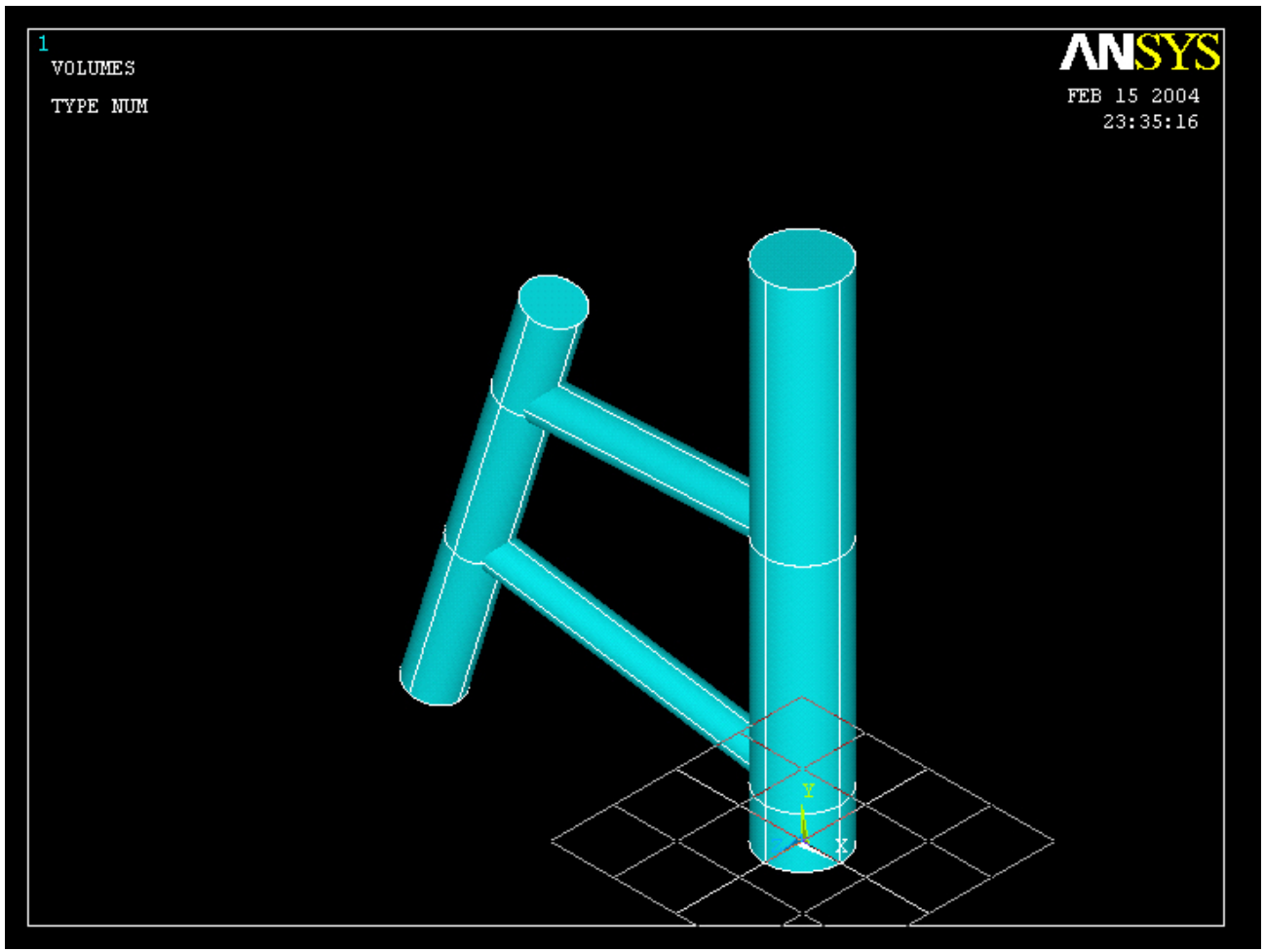


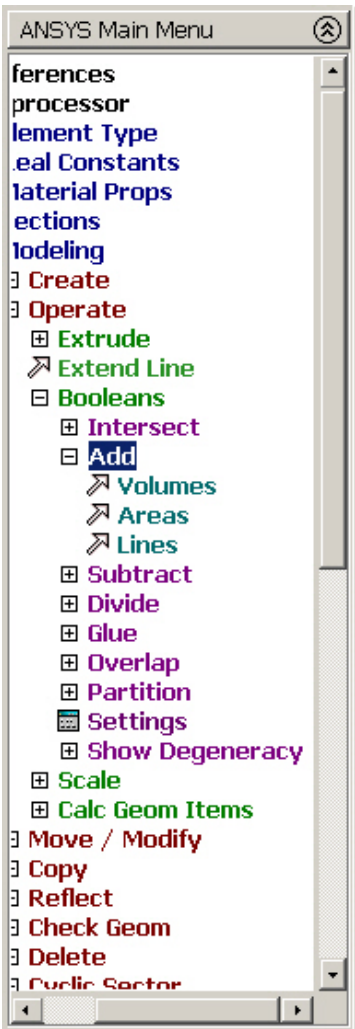
Example – Extrude



Example – Extrude



Example – Add



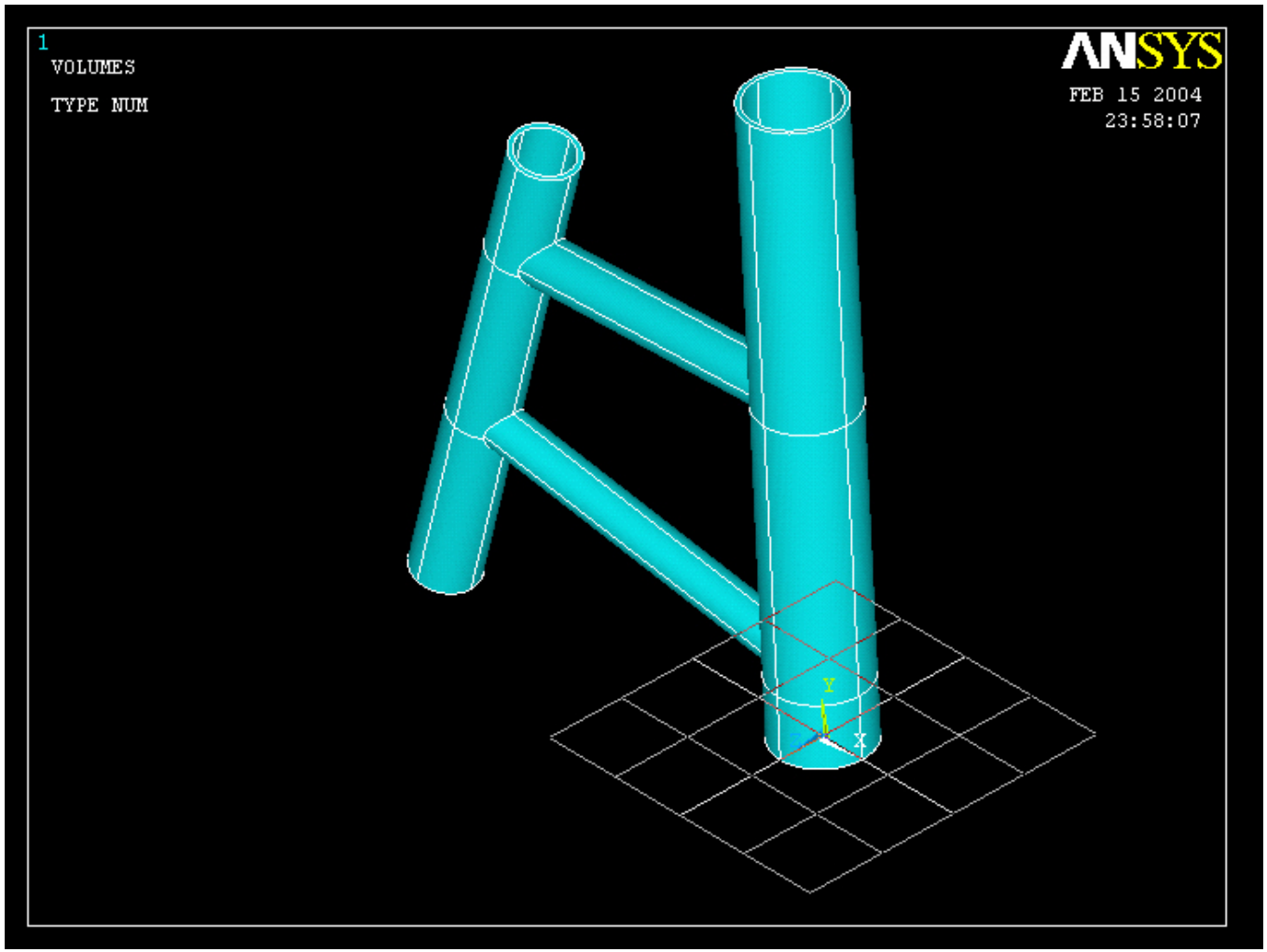
Select Add Volumes and select the recently created volumes

Example

- Perform the process again. Now create the volume given by the inner radii of the offshore structure.

- Finally – subtract the inner volume from the outer volume.

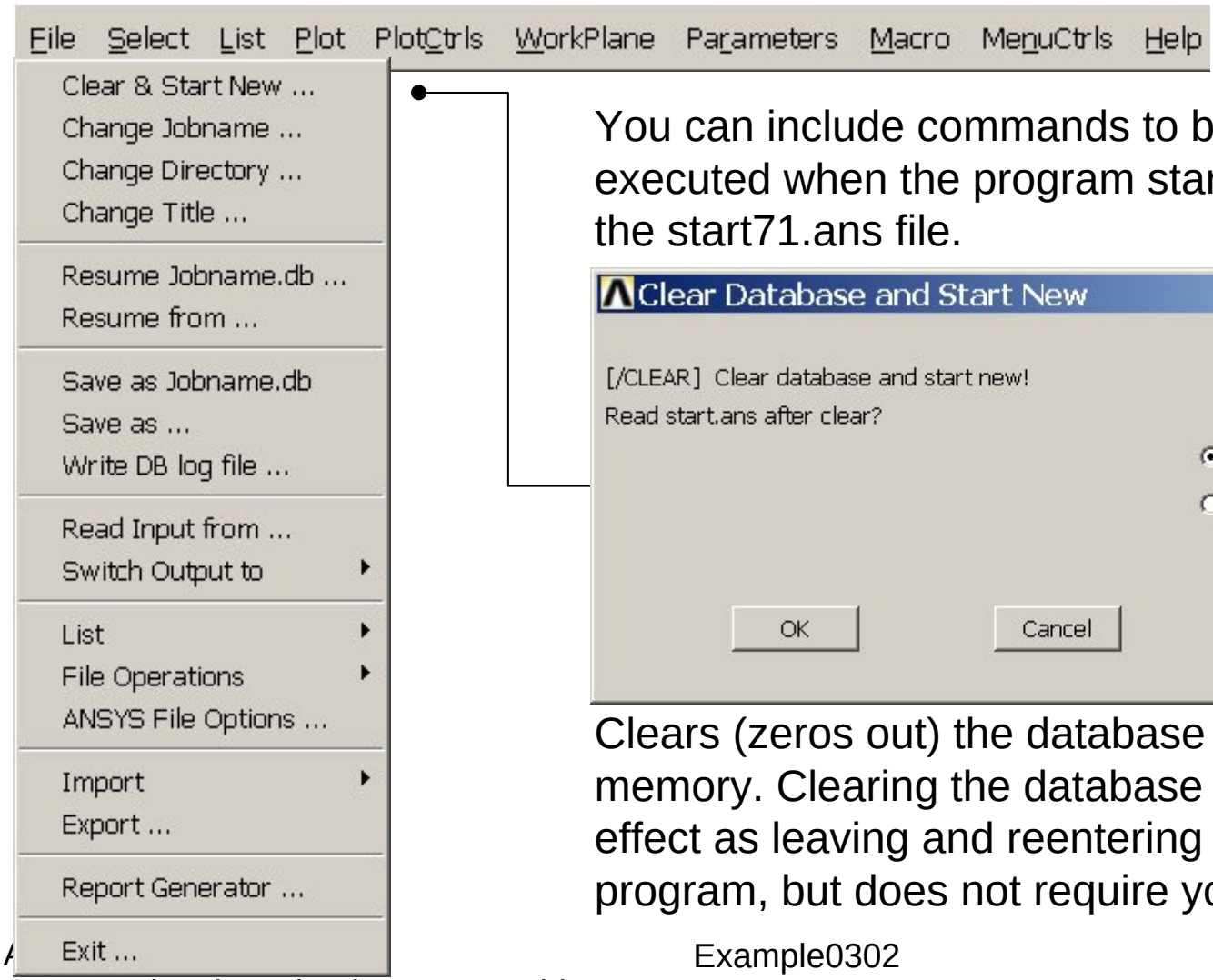
Example – Subtract



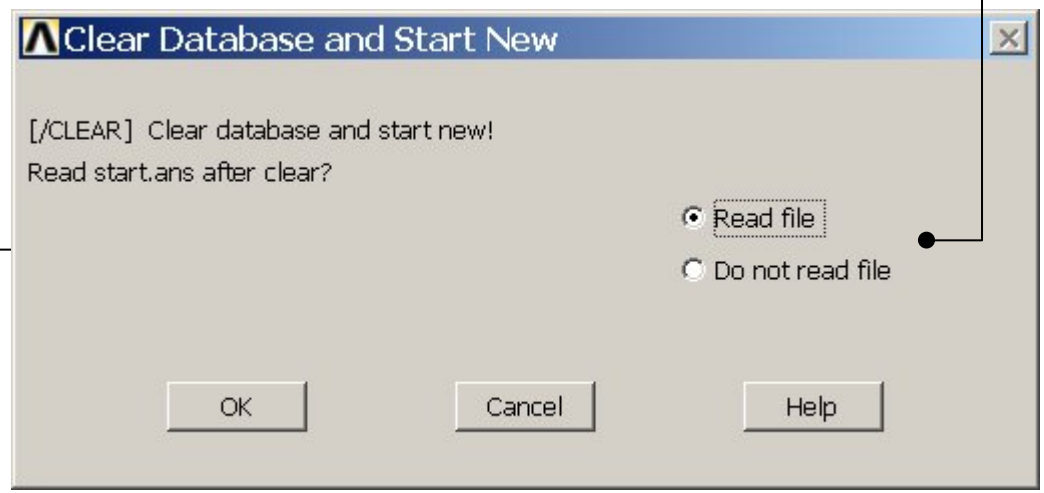
Example – Comments/Questions

- Could the model be modeled with bean elements instead of pipe elements?
- The “example0302.lgw” can be edited in “Notepad”
- Will the number of elements affect the solution?

File menu



You can include commands to be executed when the program starts up in the start71.ans file.



Clears (zeros out) the database stored in memory. Clearing the database has the same effect as leaving and reentering the ANSYS program, but does not require you to exit.