3DXpert™ for SOLIDWORKS®

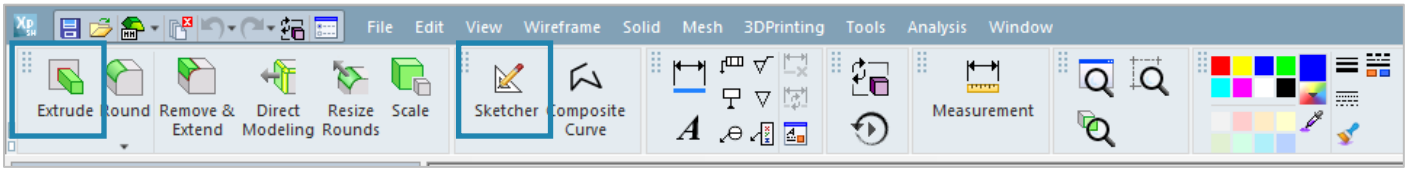
PART DESIGN

Extrude Exercise

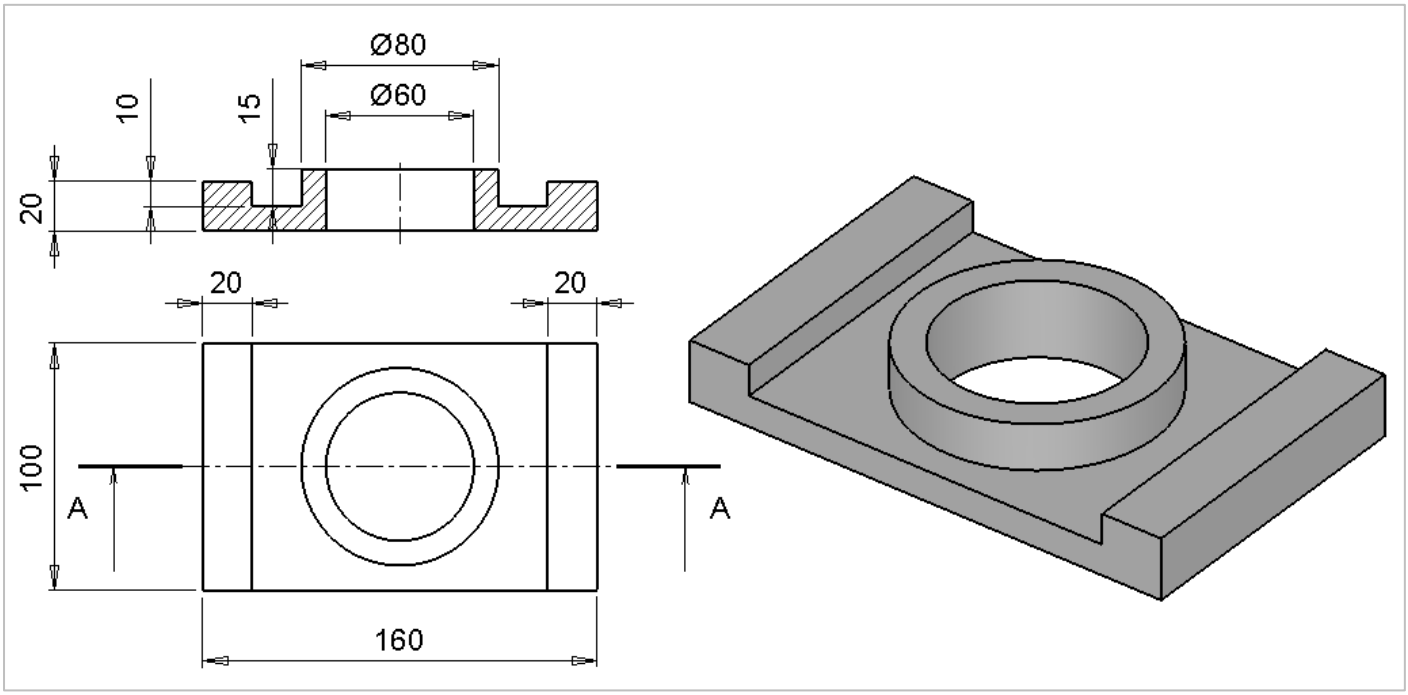
13,0600,1489,1598(SP6)

3D SYSTEMS

In this exercise, we will learn the Extrude function and practice the sketcher.

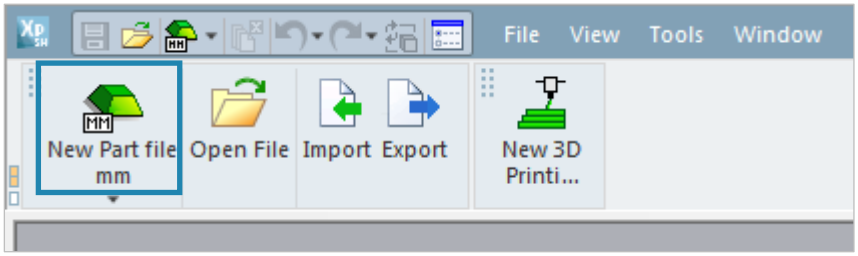


With these two functions, we will build the following model:

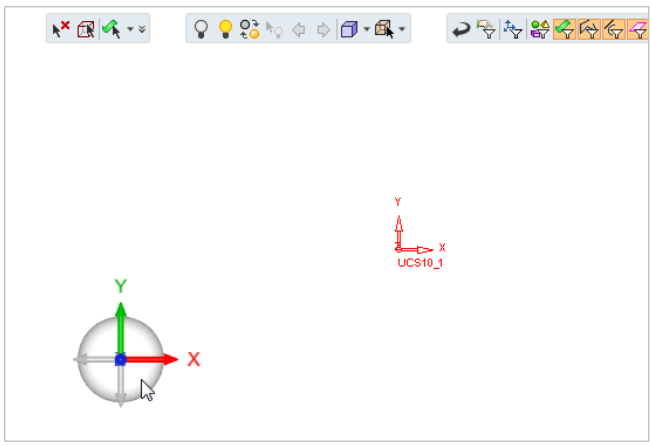


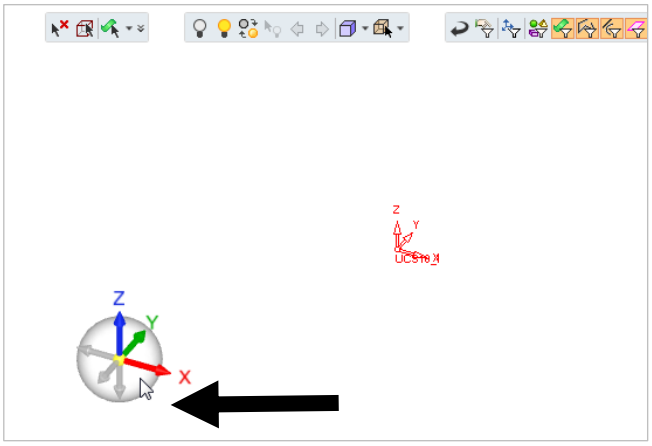
! Notice/ Remember		Left mouse button name is ***"pick"***
		Middle mouse button name is ***"Exit"***

1. From the main menu ***pick*** "New Part File":



2. After the file is open press ***pick*** on any section of the white ball in the bottom left corner to get a 3D view (known as Iso view) of the screen

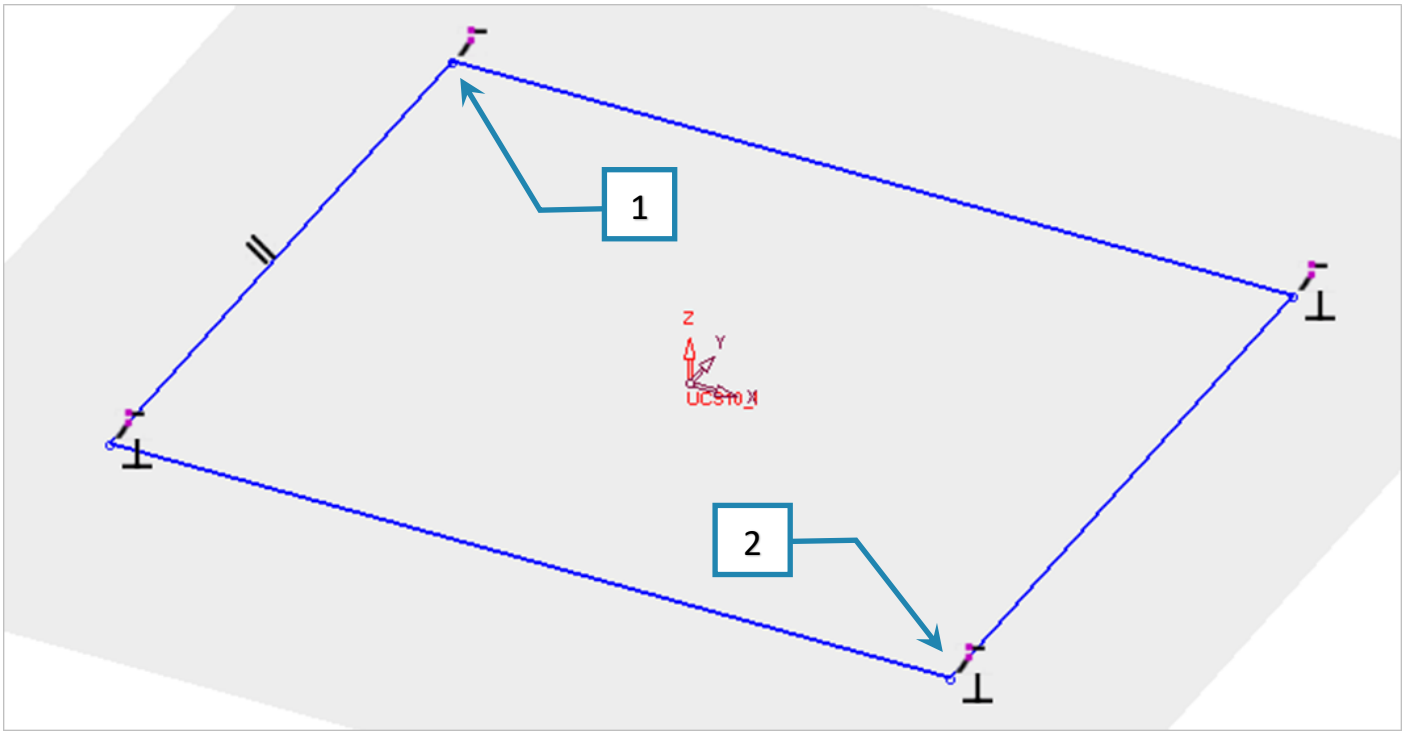




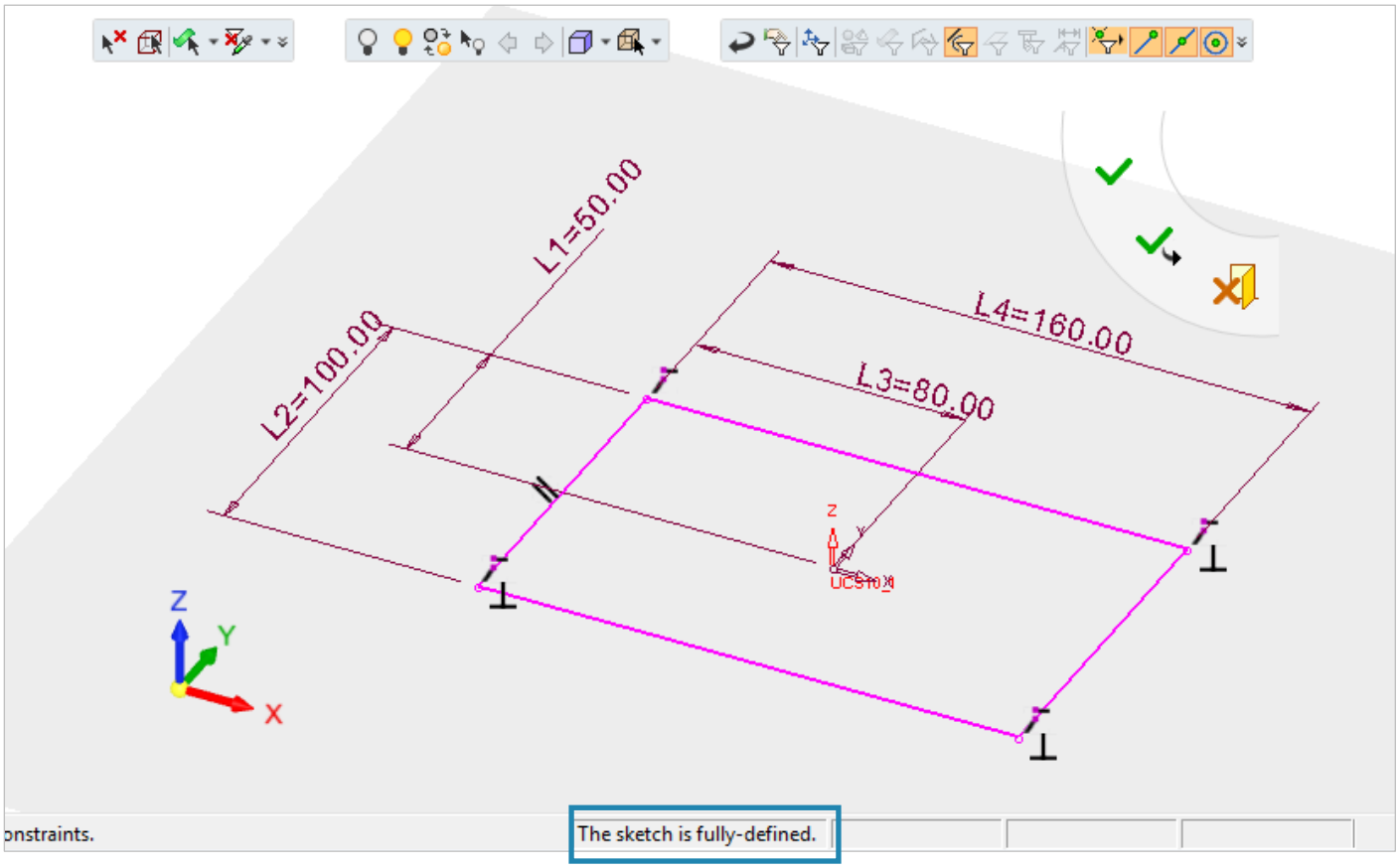
3. ***Pick*** the "Sketcher" Command and then ***Exit*** (middle mouse button).

!	*Please notice: The sketcher opens on XY plane, as this is a default for it – in any other cases we need to **pick** the desired plane.*

4. ***Pick*** the rectangular Command  and ***pick*** 2 points on the screen as shown in the picture:



5. ***pick*** the dimension command  and give dimensions as follow:



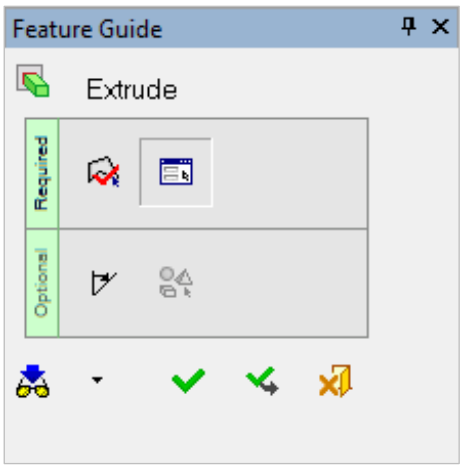
!	*Please notice: The sketcher become pink when it is "fully defined".* *It is possible to see at the bottom of the screen that* The sketch is fully-defined. .

After finishing the sketcher and get it fully defined, approve it by "OK"  .

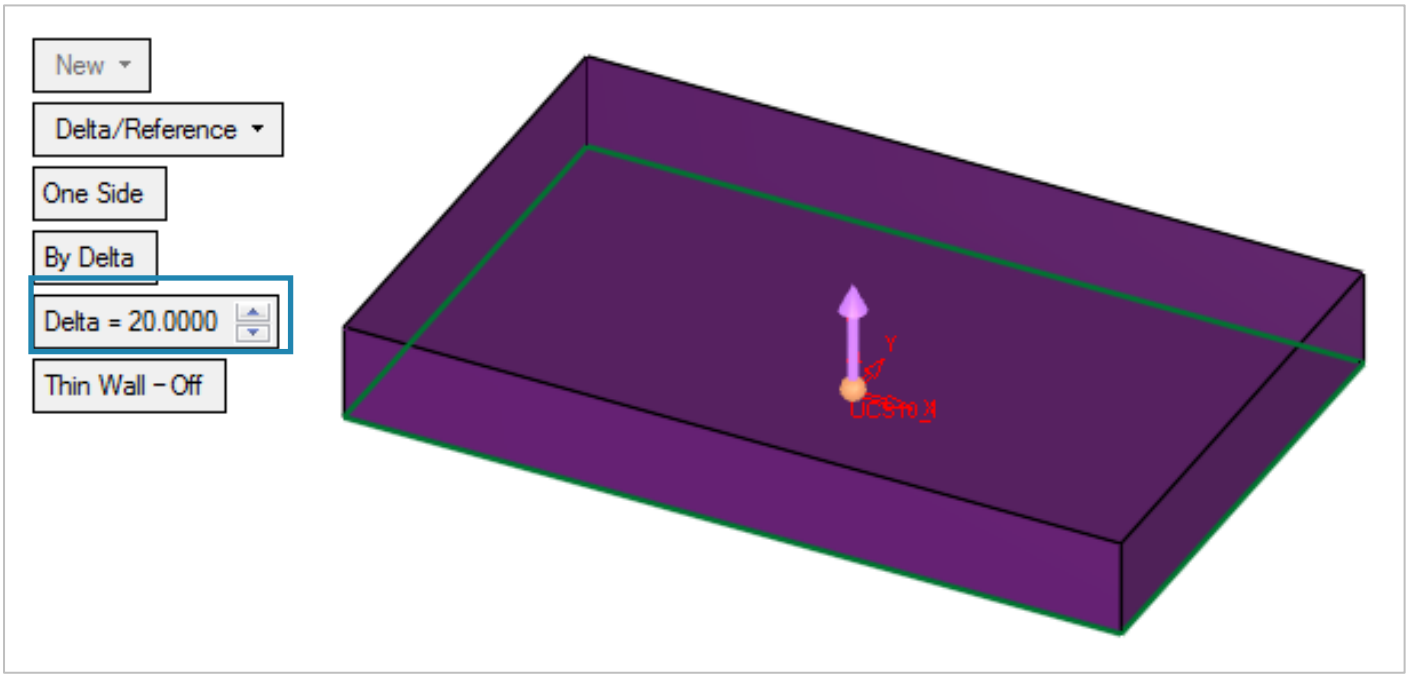
6. From the toolbar ***pick*** the "Extrude" Command  ,

Notice that in the Feature Guide on the left the first stage of selecting the contour is checked as done and the function "jumps" to the second stage to enter the Extrude parameters.

	Extrude
	***pick*** edges and/points for round
	Set parameters
	**Options** - If required
	To approve and finish use the *"**OK**"*
	To approve and continue use the *"**Apply**"*
	**"Cancel"** – exit the command without keep changes

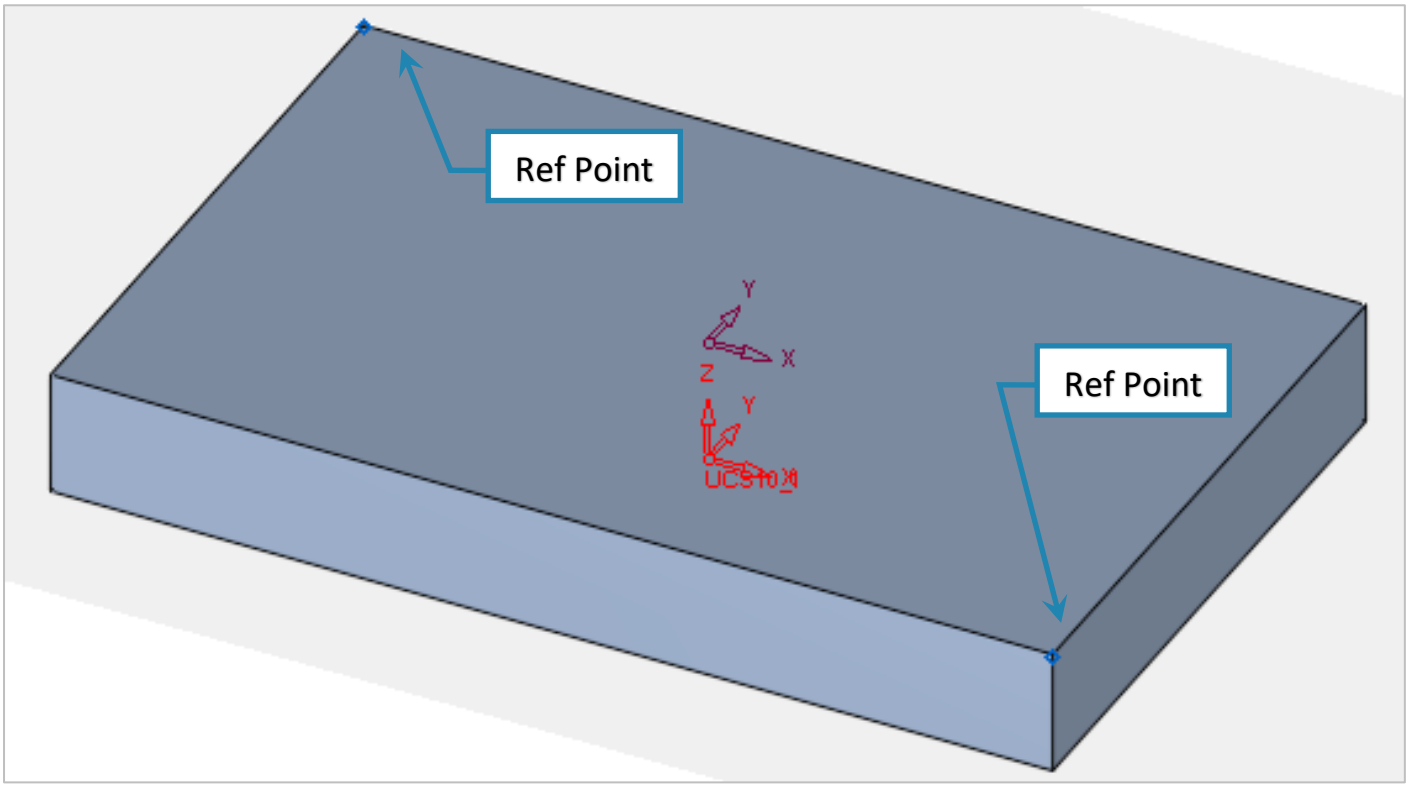


7. Set the parameters as shown in the picture and then approve it by "OK" .



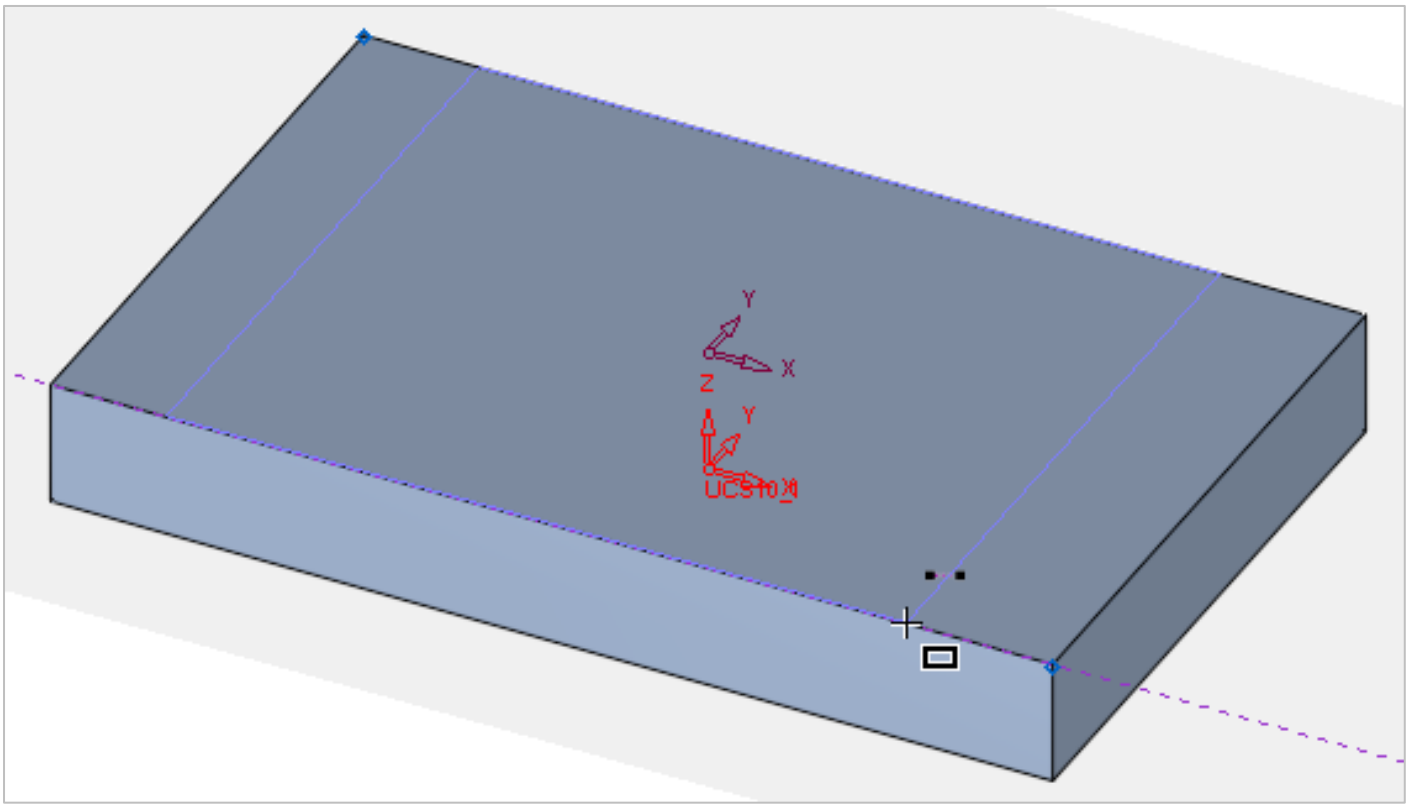
8. ***Pick*** the Sketcher Command and ***pick*** the top face of the box as the sketch plan. On that plan we will do the following:

Pick the "Add Reference" Command and ***pick*** the 2 corners of the box as shown, and then ***Exit***.

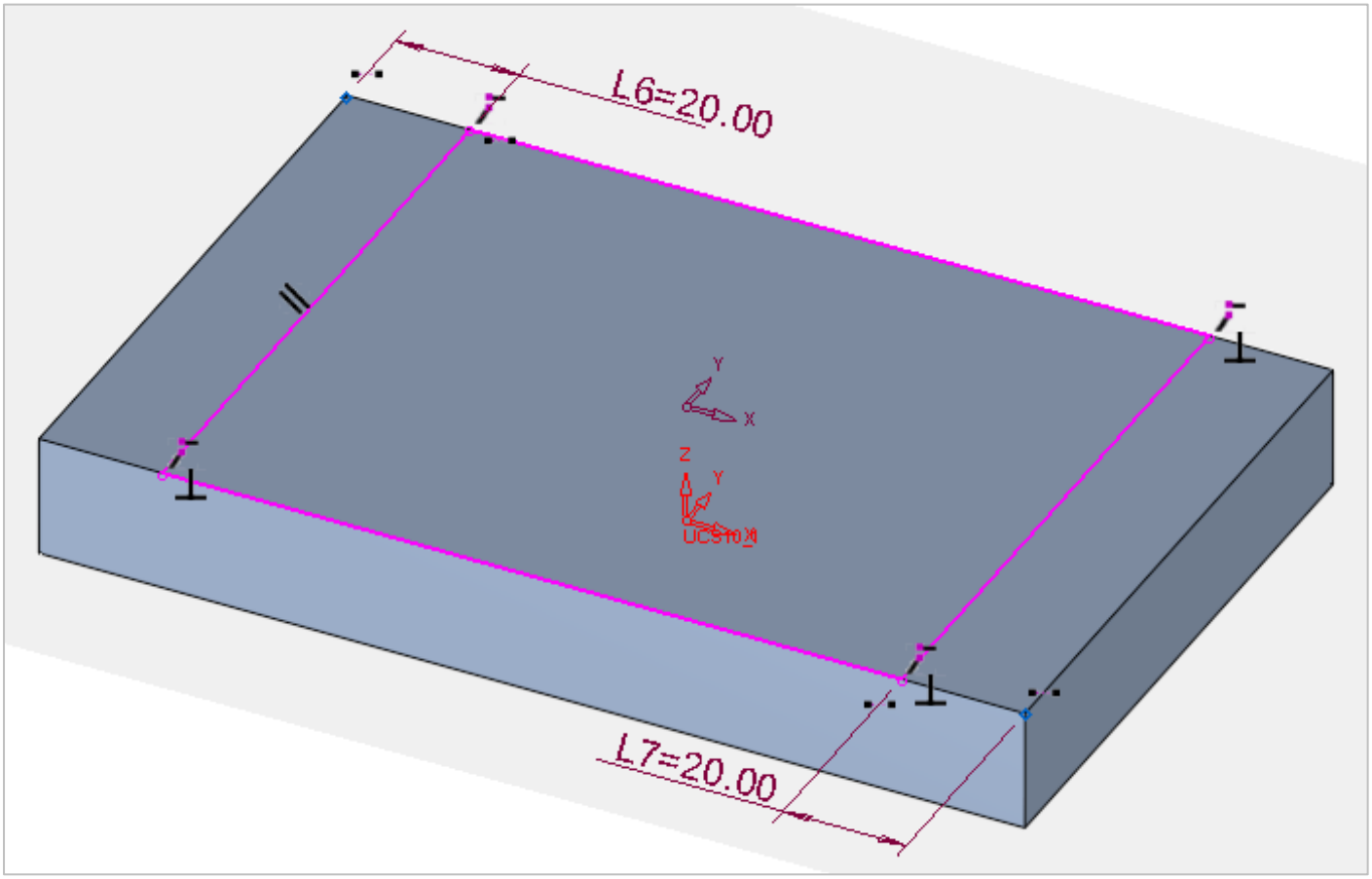


Please notice: The "Add Reference" command and the entities that we chose will guide us while sketching the geometry to see where to draw the edges of the box.

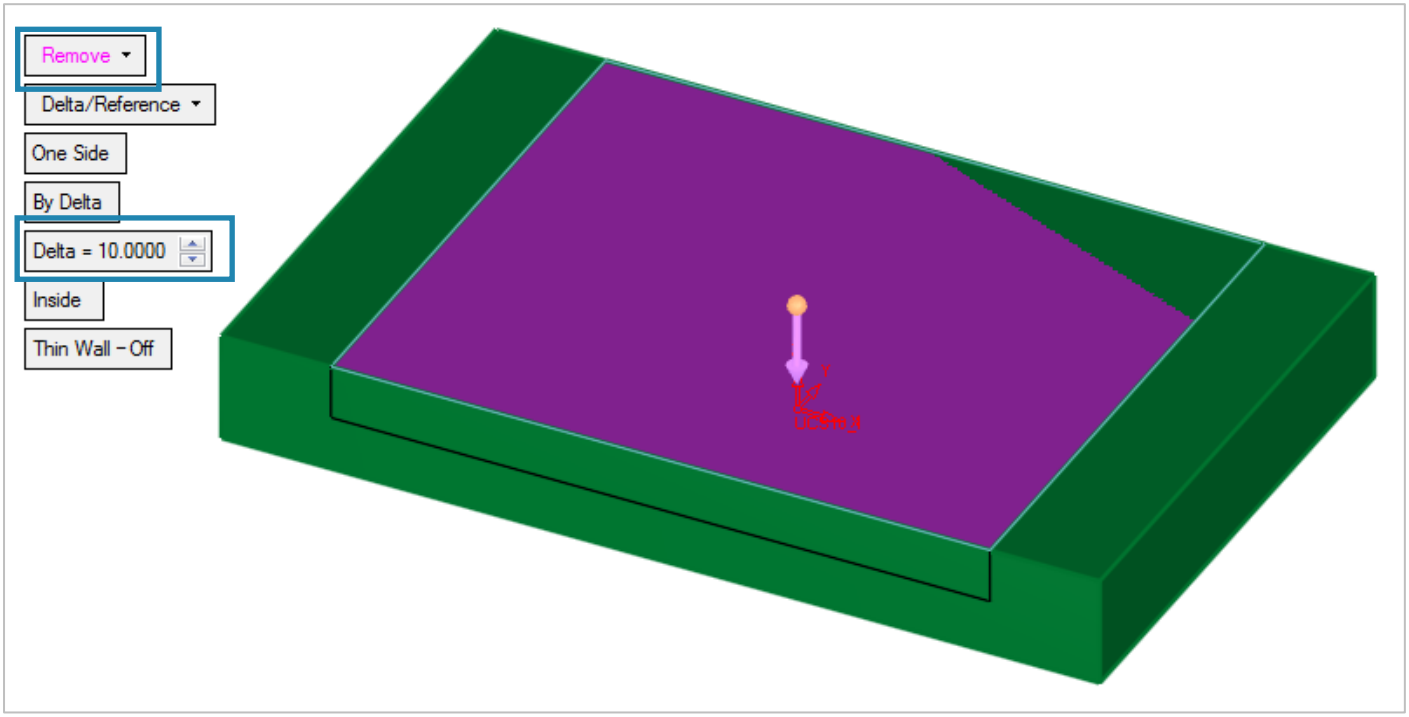
9. ***Pick*** the rectangular Command  and ***pick*** 2 points on the edges of the box while seeing the Reference points, as shown in the picture:



10. Add dimensions as follows:

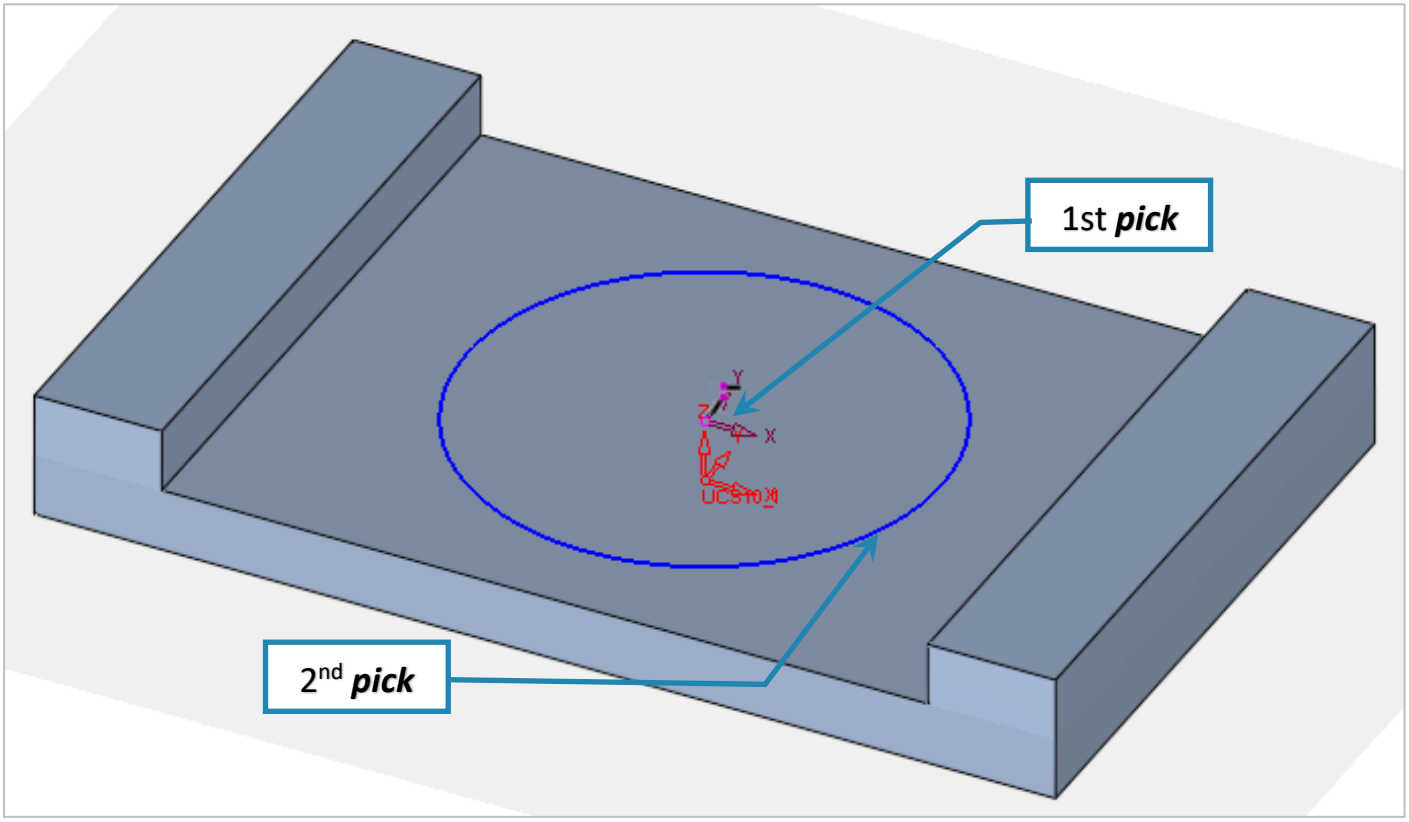


11. ***Pick*** the "Extrude" Command  , Set the parameters as shown in the picture, note to set it to "Remove". After setting approve it by "OK"  .

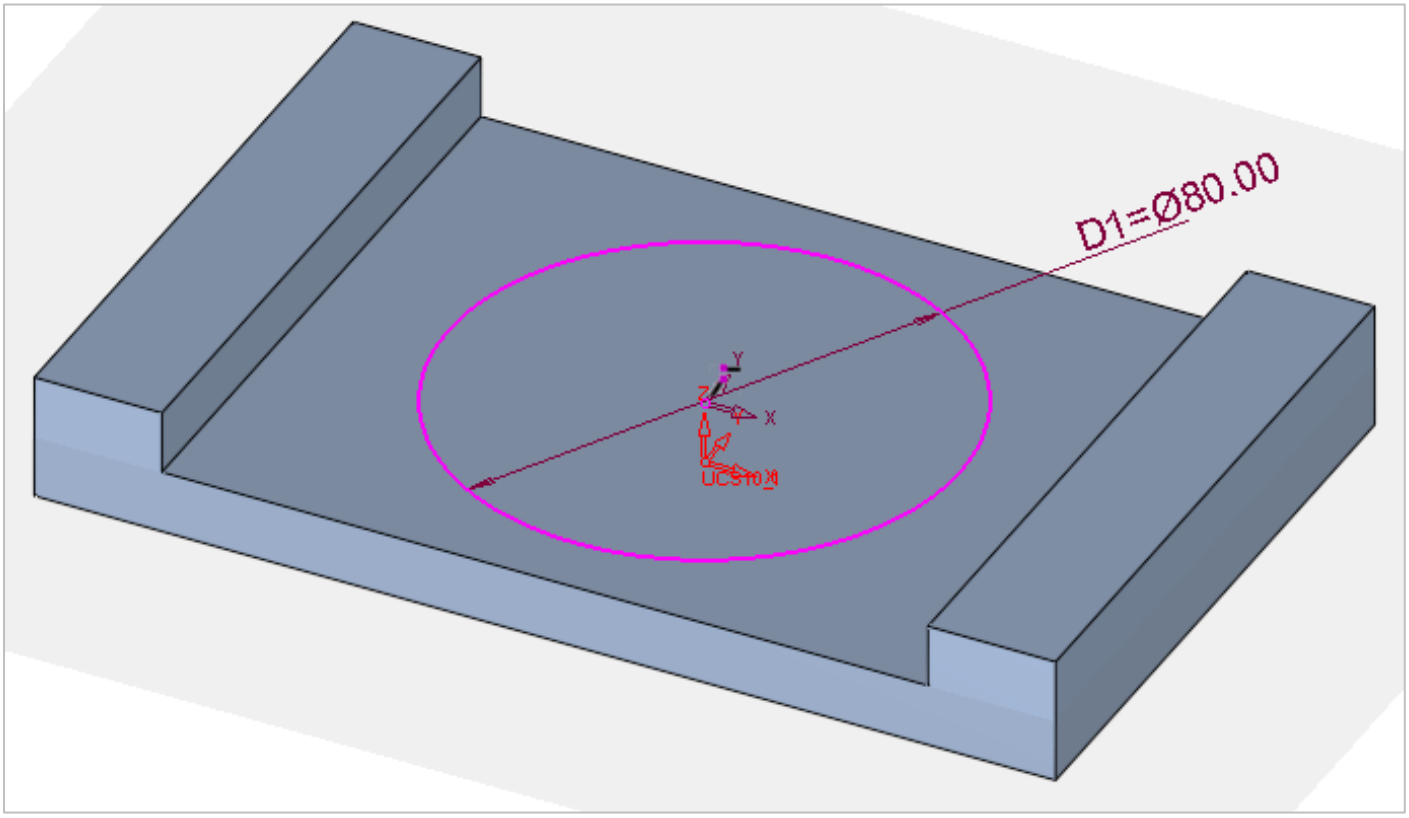


12. ***Pick*** the Sketcher and ***pick*** the new top face as the sketch plan. On that plan we will do the following:

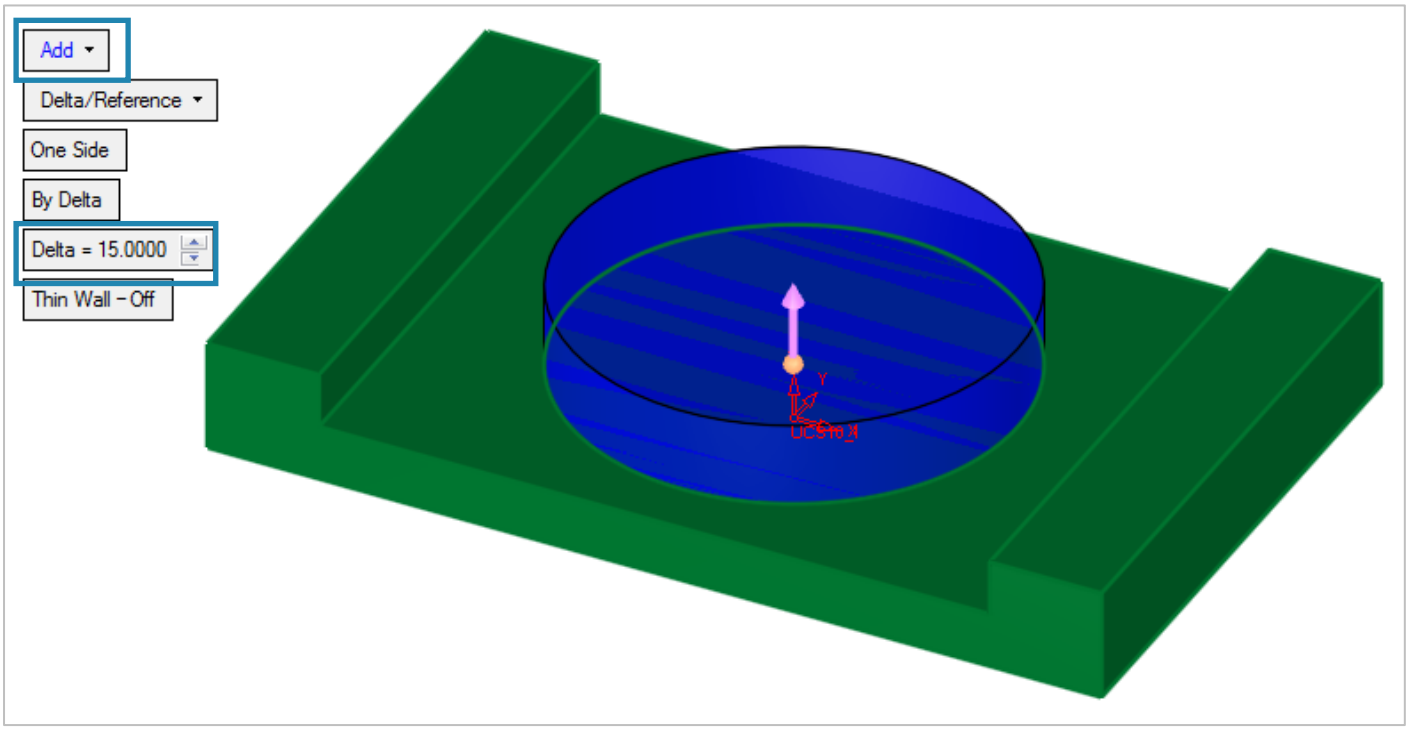
Pick the "Circle" command  and 1st ***pick*** the center of the face (where the upper XY are intersect) for center point of the circle and then a 2nd ***pick*** on the face for the circle diameter.



13. Add dimensions as follows and then approve it by "OK" .

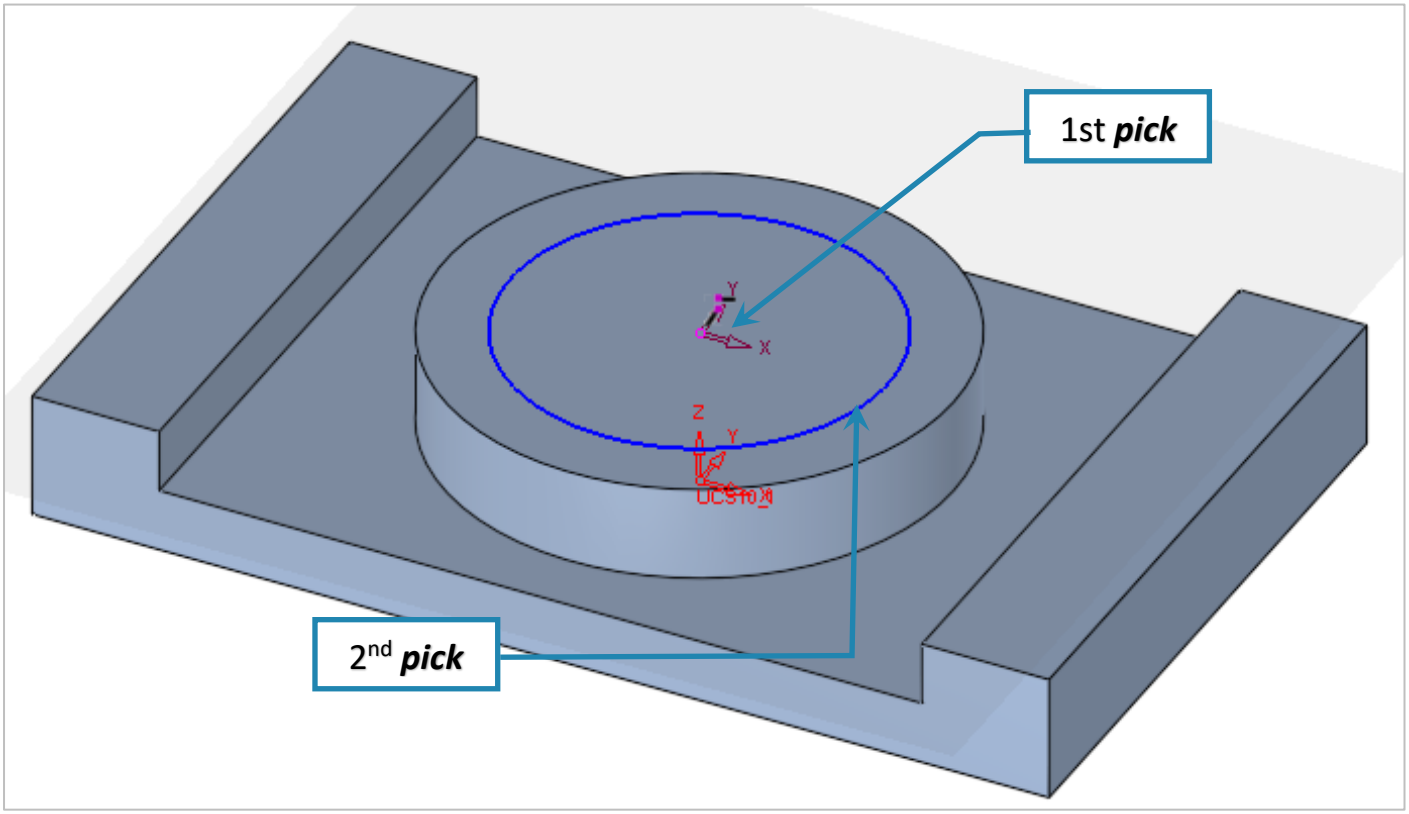


14. ***Pick*** the "Extrude" command , Set the parameters as shown in the picture, note to set it to "Add". After setting approve it by "OK" .

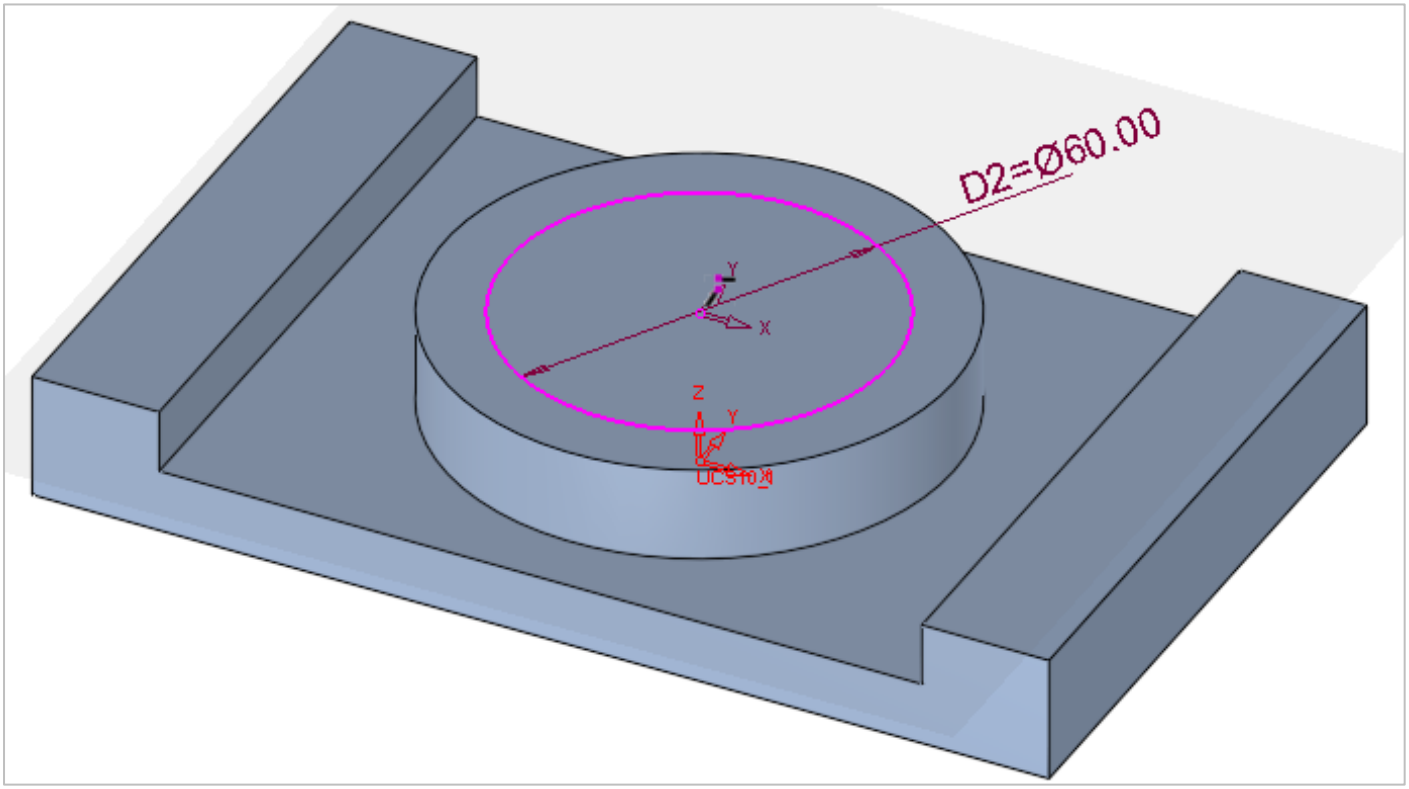


15. ***Pick*** the Sketcher and ***pick*** the cylinder top face as the sketch plan. On that plan we will do the following:

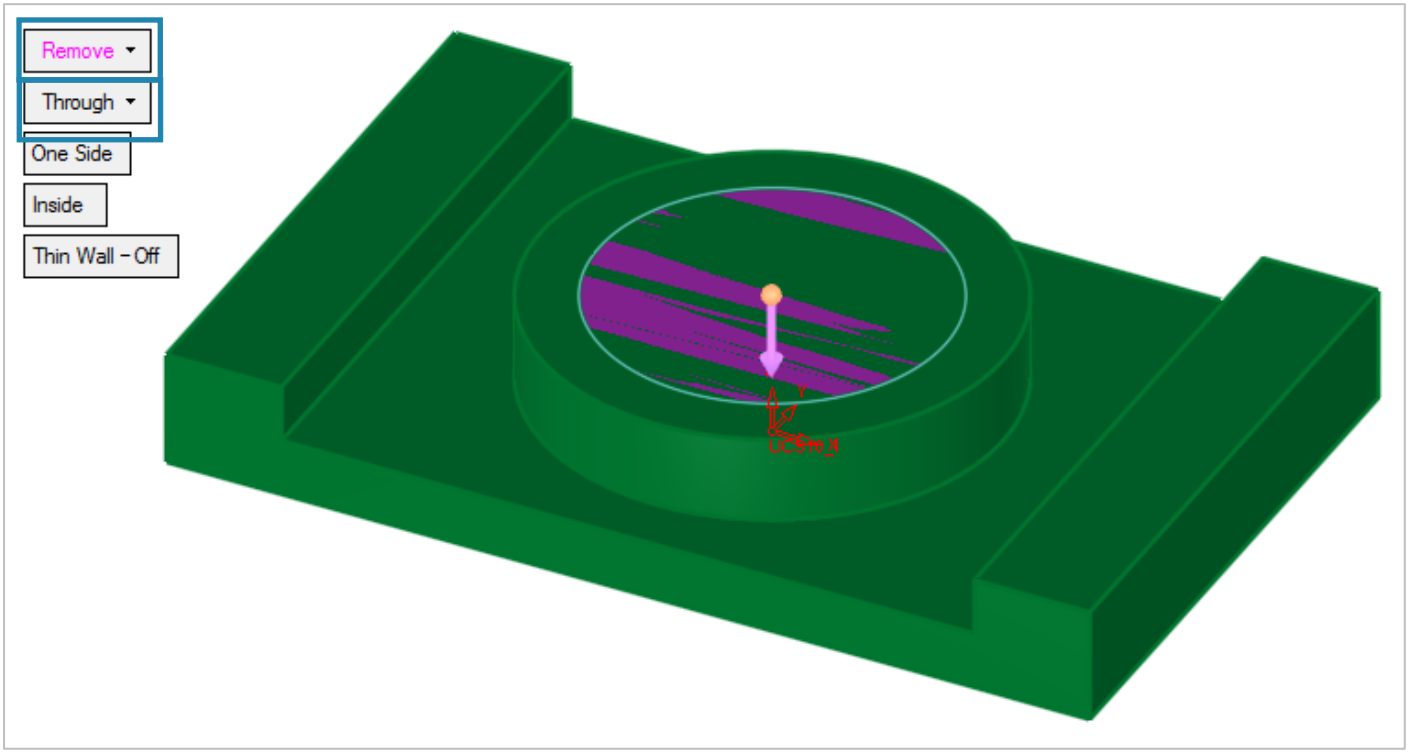
Pick the "Circle" command  and 1st ***pick*** the center of the face (where the upper XY are intersect) for center point of the circle and then a 2nd ***pick*** on the face for the circle diameter.



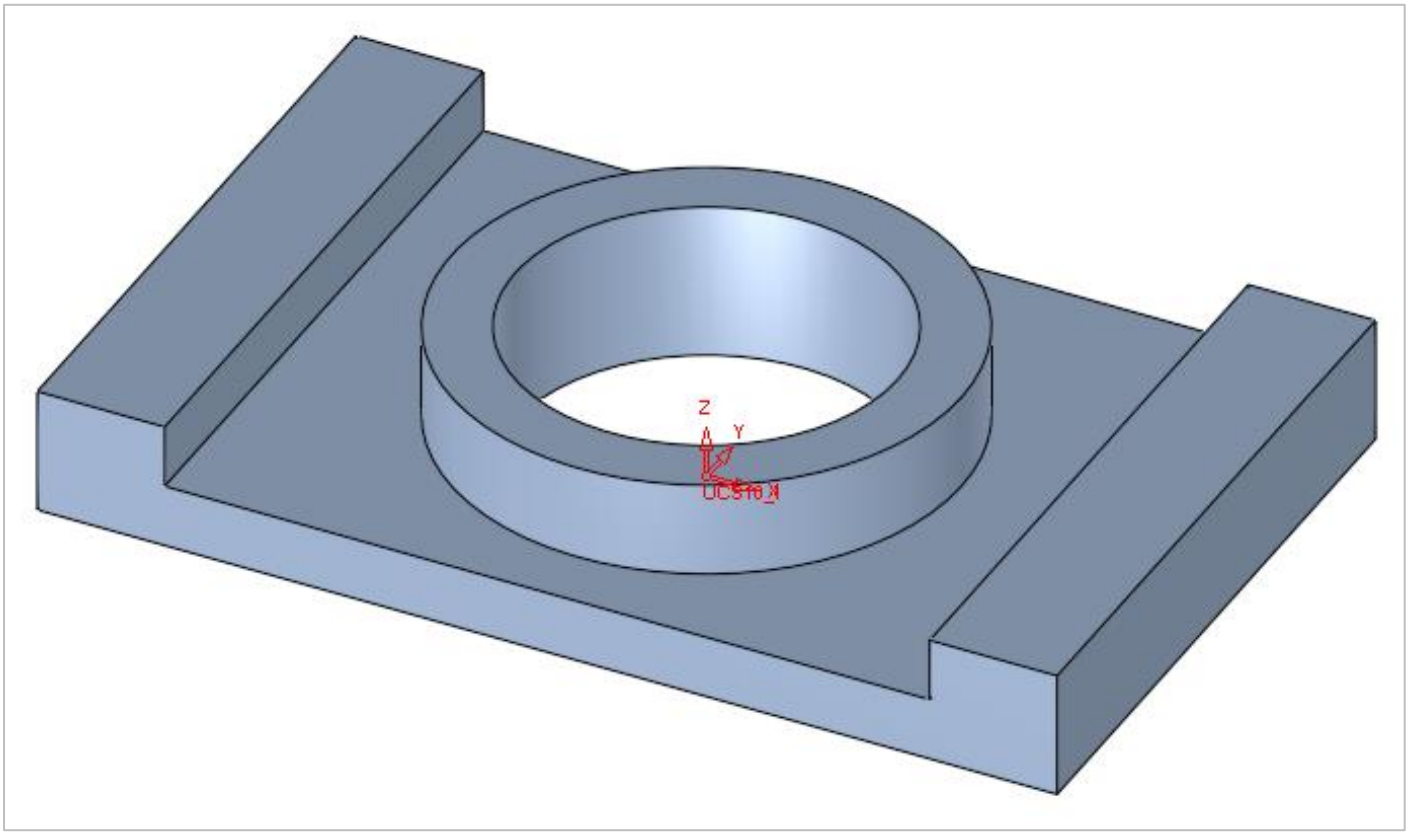
16. Add dimensions as follows and then approve it by "OK"  .



17. ***Pick*** the "Extrude" command  , Set the parameters as shown in the picture, note to set it to "Remove". After setting approve it by "OK"  .



18. This is the final result:



End of Exercise.