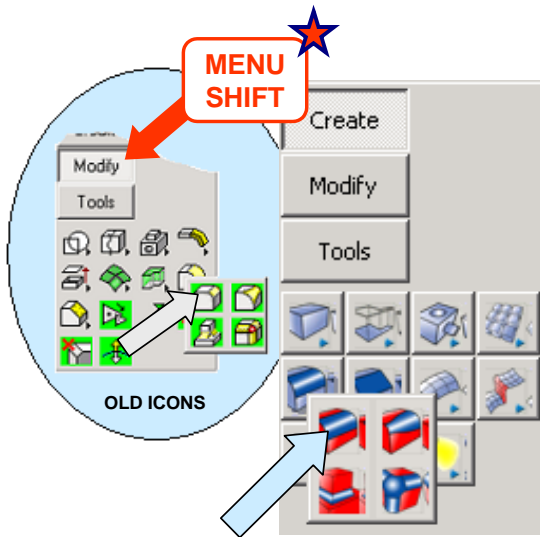
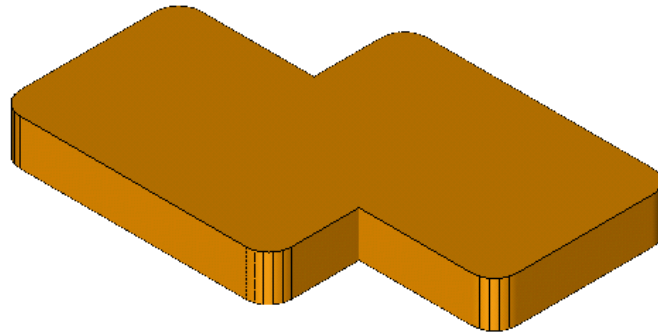


Click on the ALL DSP Option and then on the ALL Option and hit the ENTER Key.

A double-headed vector appears on the screen. Click on the downward-facing vector to indicate the extrude direction.

You will now have a part that looks like this:



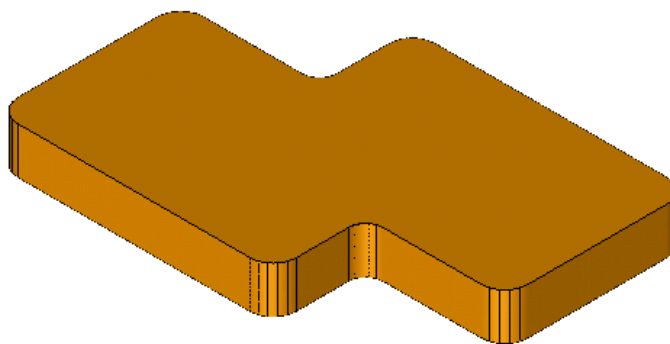
Click on the CONSTANT RADIUS BLEND Icon.

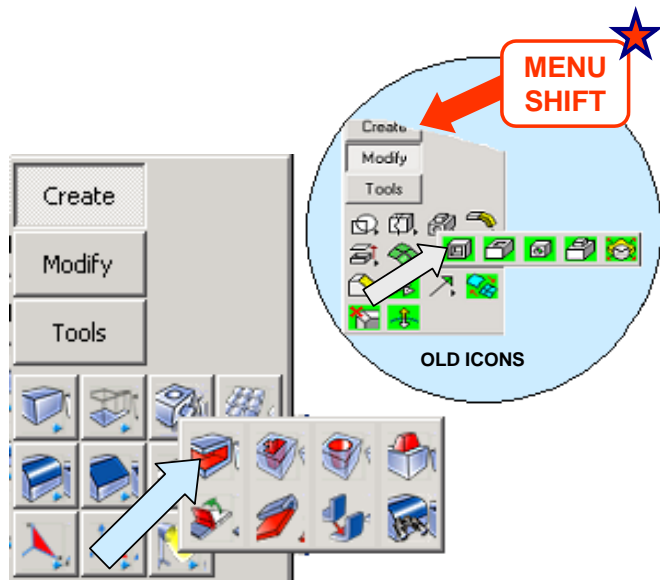
A Dialog Box appears.

Type 0.375 for the Radius and hit the ENTER Key.

Select the two, inside, vertical edges on the part and hit the ENTER Key.

Your part will now look like this:





Now, click on the SHELL Icon.

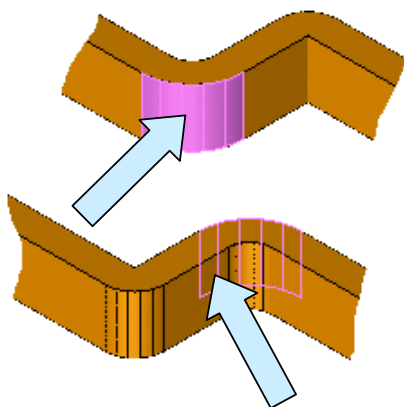
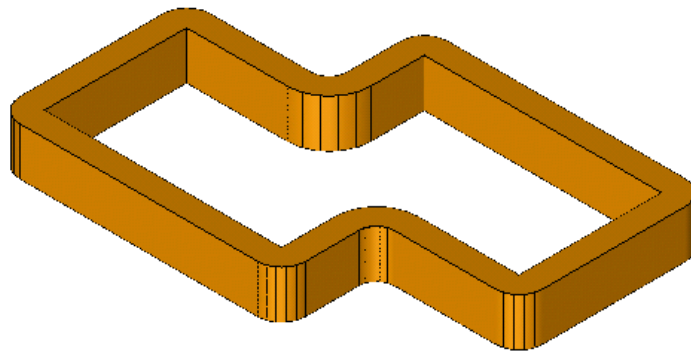
A Dialog Box appears.

Type 0.5 for the shell thickness and hit the ENTER Key.

Click on the top face of the part and then select the bottom face of the part, using the toggle selection Hot Key (Spacebar or Tab) to index to the surface.

Then, hit the ENTER Key.

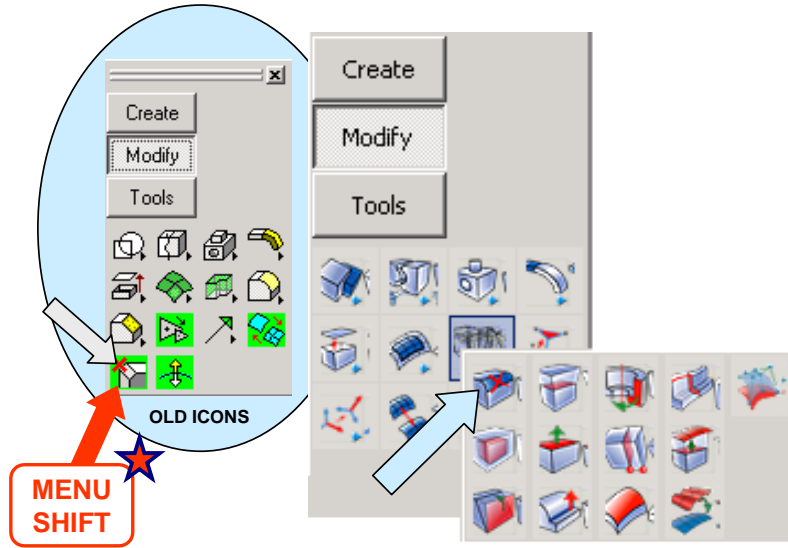
Your part should now look like this:



Let's suppose that we want all of the inside corners to be sharp.

The shell function created radiused walls opposite the two inside corners on the original part.

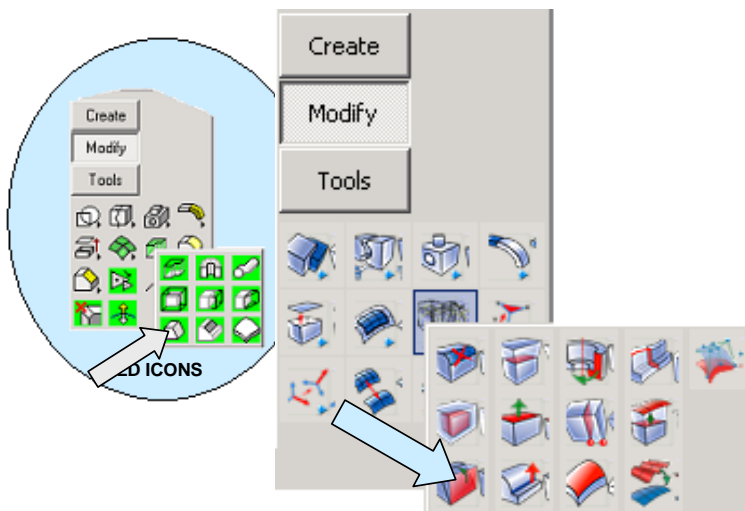
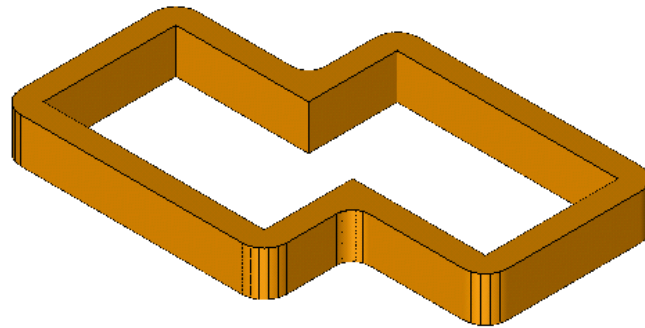
We can easily eliminate these two blends by using the REMOVE FEATURE Tool.



Click on the REMOVE FEATURE Icon.

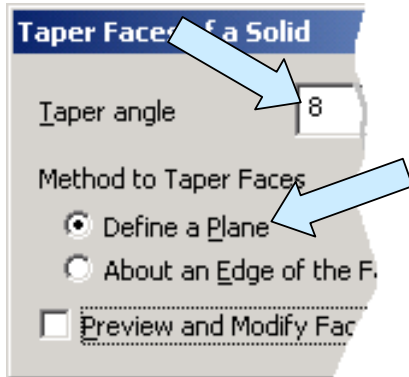
Move the cursor over one of the inside blends and click when it highlights. Repeat with the second inside blend and hit the ENTER Key. (Yes, sometimes we just single pick things without any fancy options!)

Your part should now look like this:



Now this part was created with zero draft during the extrusion step. Let's assume that we would want to add 8 degrees draft to all of the outside, vertical surfaces of the part.

To do this, click on the TAPER FACES Icon.

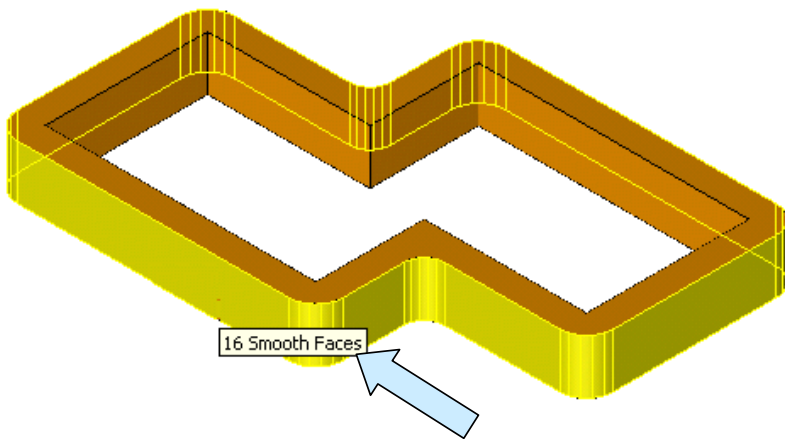
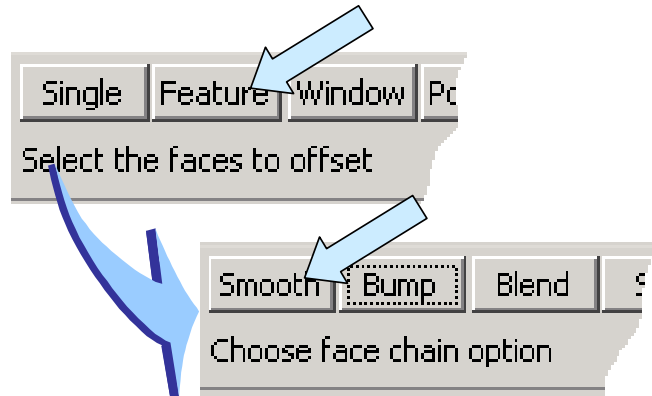


A small Dialog Box appears.

Type 8 for the Taper Angle and select the Define a Plane Option. Hit the ENTER Key.

You are prompted to select the faces to taper.

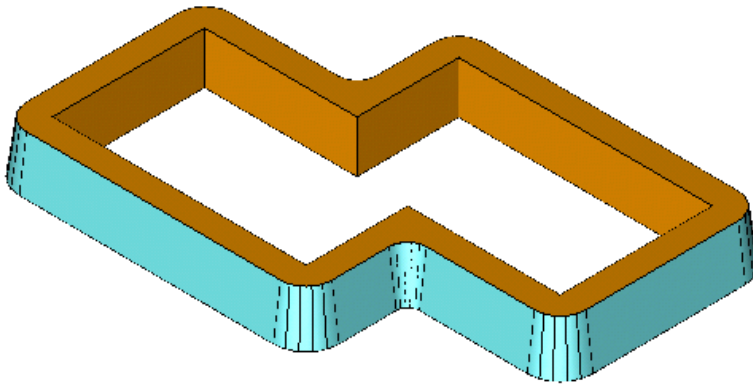
Click on the FEATURE Option on the Conversation bar and then on the SMOOTH Option.



Move the cursor over any part of the outside wall on the part and all sixteen of the outside, vertical faces highlight.

Click on the Highlighted faces and hit the ENTER Key three times.

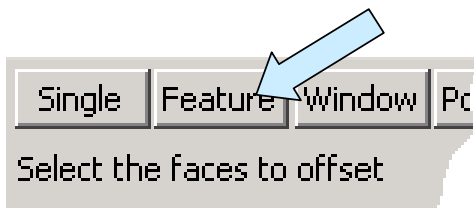
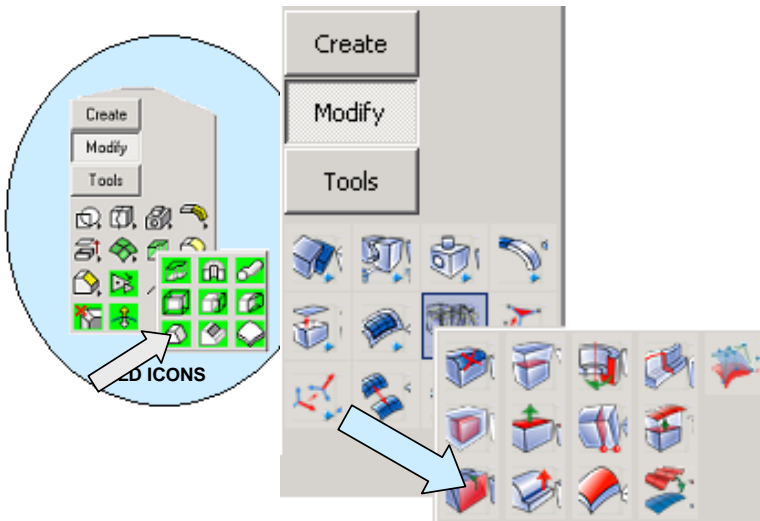
You are prompted to select the taper reference plane. Move the cursor over the top surface of the part and click on it when it highlights. (You may have to hit your toggle selector (SPACEBAR or TAB KEY) to index to the face.)



Your part will now look like this: (I've colored the tapered faces using the FACE COLOR Tool and a SMOOTH selection to highlight the change in the illustration to the left!)

Now, let's suppose that we would like to create a draft of thirty degrees on the inside, vertical surfaces of this part.

Click on the TAPER FACES Icon and this time type 30 for the Draft Angle. Hit the ENTER Key.

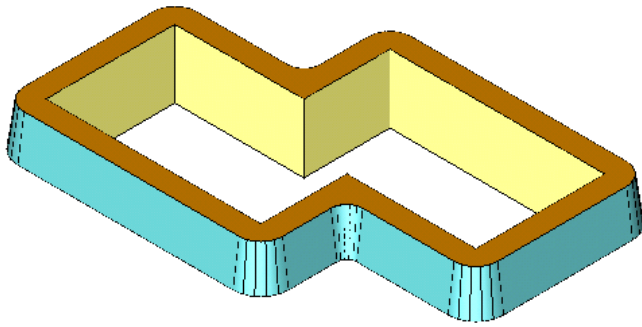


Click on the FEATURE Option on the Conversation Bar.

Since there are no corner blends on the inside walls, the SMOOTH Option will not work.

The BUMP Option, however, will give you what you want. Click on BUMP and then move the cursor over the inside, vertical wall and all of the inside walls highlight. Click on the highlighted walls and hit the ENTER Key three times.





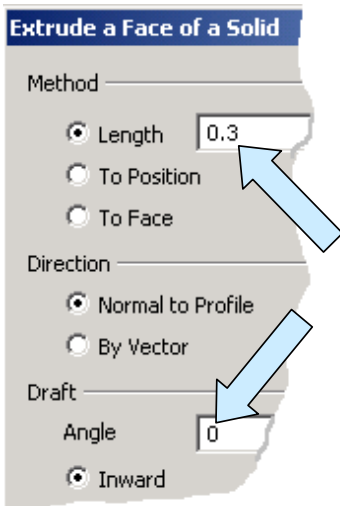
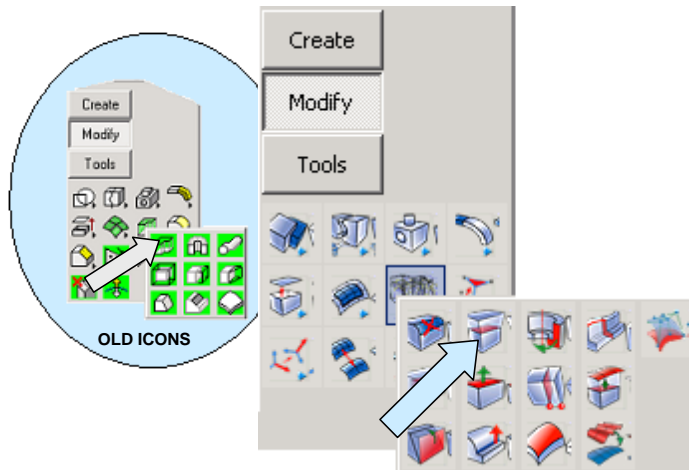
Your part should now look like this: (I've highlighted the 30 degree taper surfaces in yellow.)

Options Available for Extending a Part with Draft

While we have the above part on our screen, let's look at several options available to you should you have to extend the top face of the part upward.

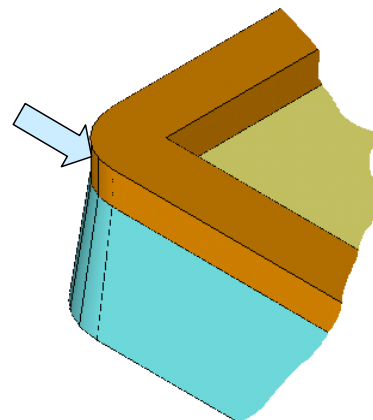
Remember that the outside surfaces have a draft angle of eight degrees and the inside surfaces have a draft angle of thirty degrees.

Click on the EXTRUDE FACE Icon.

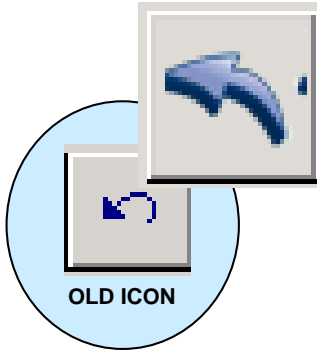


When the Dialog Box appears, type 0.3 for the Length and use a 0 Draft Angle. Hit the ENTER Key.

Now, move the cursor over the top surface of the part and click on it when it highlights.

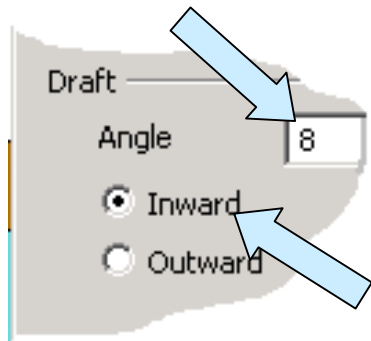
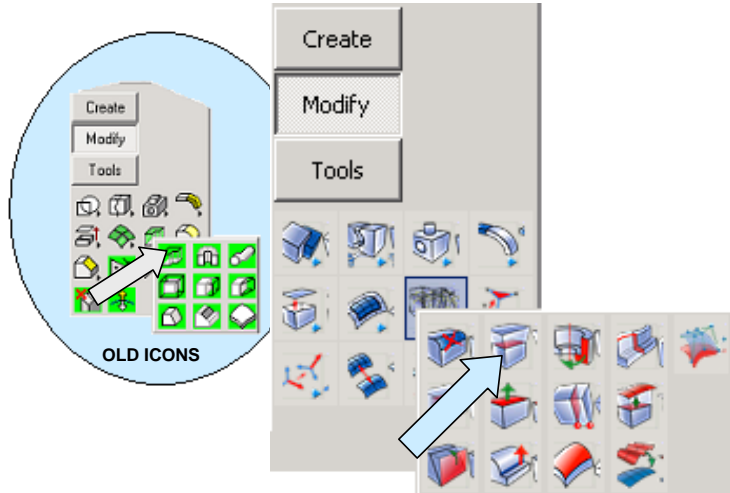


Notice that the part grows upward 0.3 inches with no draft.



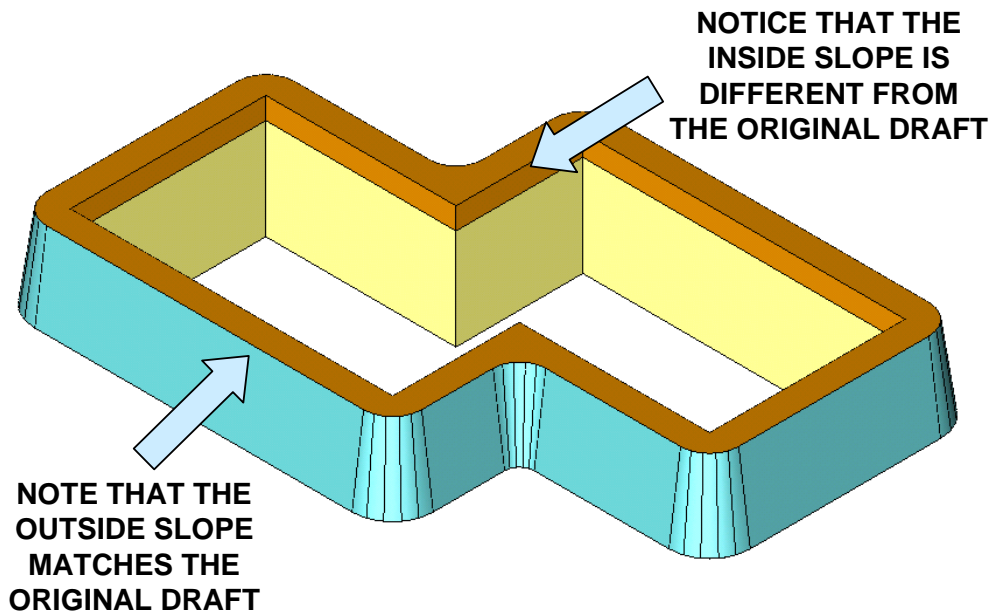
Click on the UNDO Icon once to roll back the part.

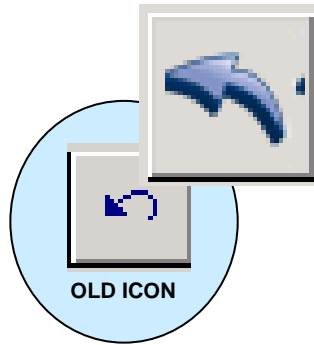
Now, click on the EXTRUDE FACE Icon again.



Use 0.3 for the Length again.

This time, type 8 for the Draft Angle and use the Inward Option. Hit the ENTER Key. Click on the top surface of the part. Both the inside and outside surfaces of the extension run at 8 degrees draft.

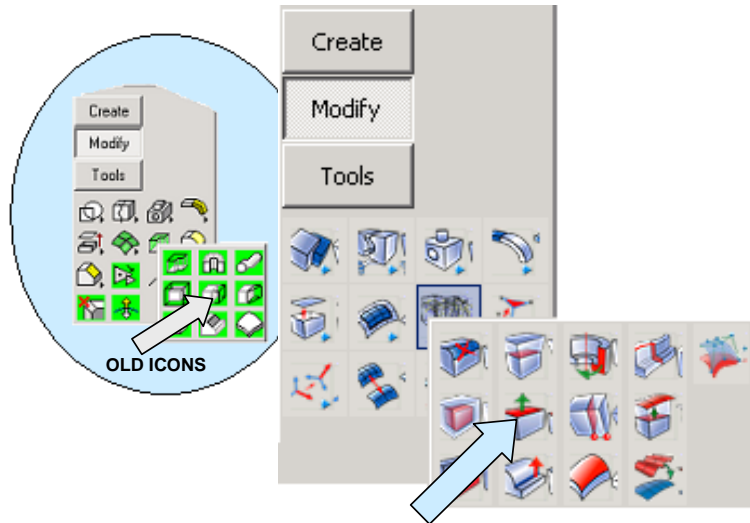




Once again, click on the UNDO Icon once to roll back the part.

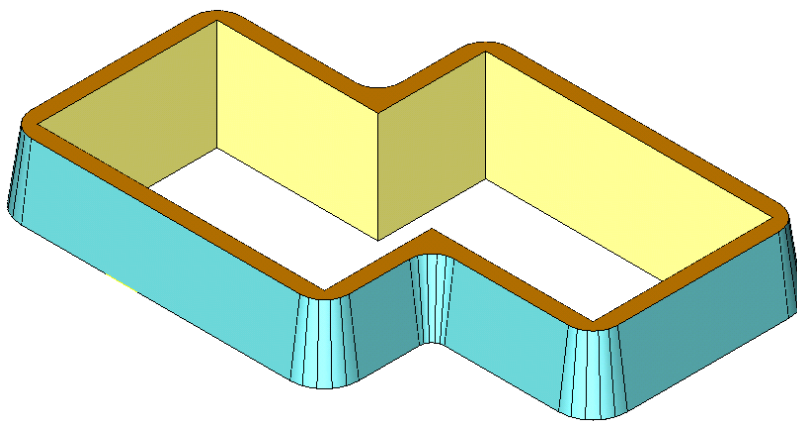
This time, click on the OFFSET FACE Icon.

You'll remember that we used this in our last exercise to modify the size of the slot in the part.



A Dialog Box appears. Type 0.3 and hit the ENTER Key.

Now, select the top face of the part. Then, hit the ENTER Key.



Notice that the part extends upward with the inside surfaces continuing on a thirty degree draft and the outside surfaces continuing at an eight degree draft!

This flexibility to quickly create a variety of different draft conditions is another powerful productivity tool provided by KEYCREATOR. You'll want to take advantage of this as you modify your designs.