

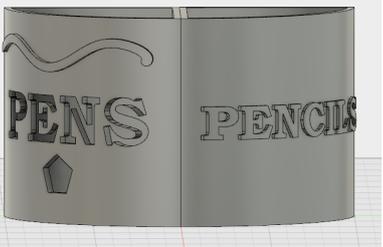


Sectioned Stationery Pot Fusion 360 Tutorial



Before using these instructions, it is helpful to watch this video screencast of the CAD drawing actually being done in the software. [Click this link for Video instructions](#)

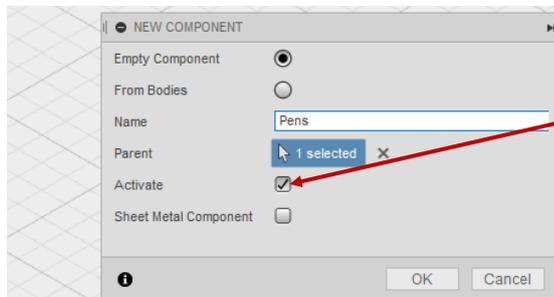
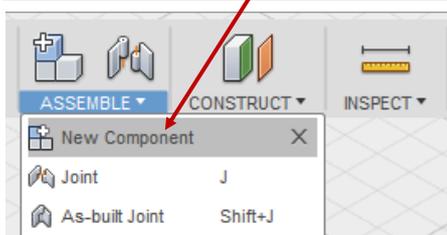
Overview



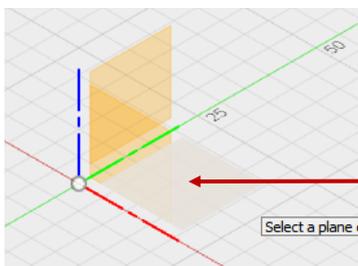
Creating a stationery pot made up of 4 sections. Learning how to cut, extrude and wrap sketches around a curved surface. Also looking at making copies of bodies and how you can use the timeline to help achieve that.

Creating First Pot Section

1) Activate a "New Component".

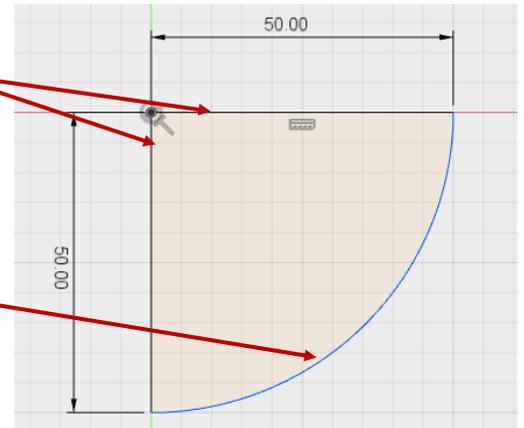


2) Give it a name and ensure the "Activate" option is ticked. I've called my component "Pens" as that is what I am going to write on the section. Click "OK".

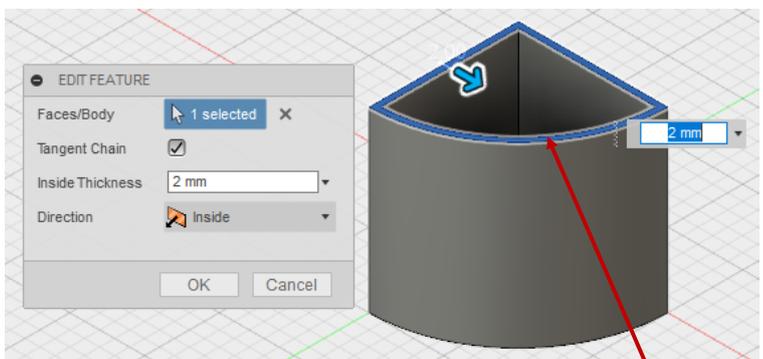
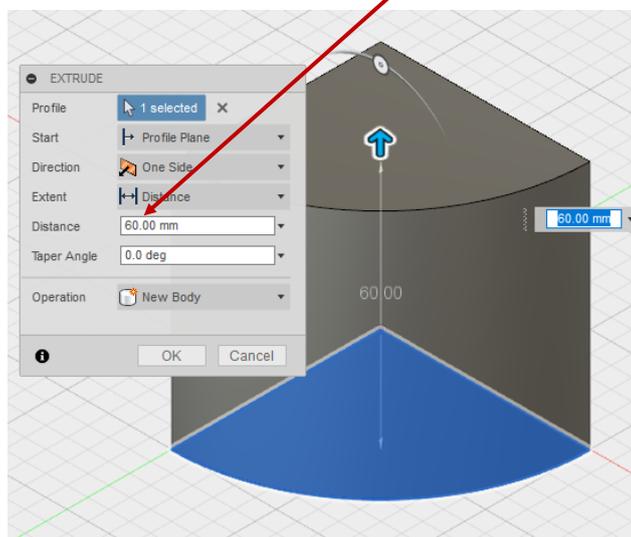


3) Initiate the line tool by click "L" on your keyboard. Select the top plane to draw your sketch on.

4) Use the line tool to draw two 50mm long lines as show in picture. Then use a "Centre Point Arc" tool to draw an arc connecting the two lines.



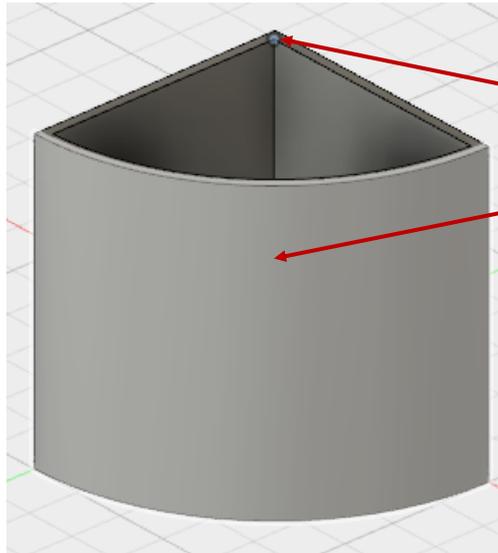
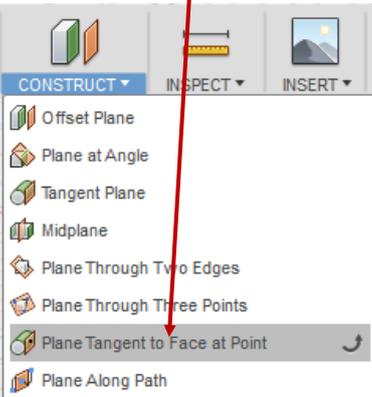
5) Extrude the sketch using "E" on your keyboard. Make it a height of 60mm.



6) Go to "MODIFY" then select "Shell". Select the top face of your section as the "Face" then make the thickness 2mm. Ensure the "Direction" is "Inside". Click OK

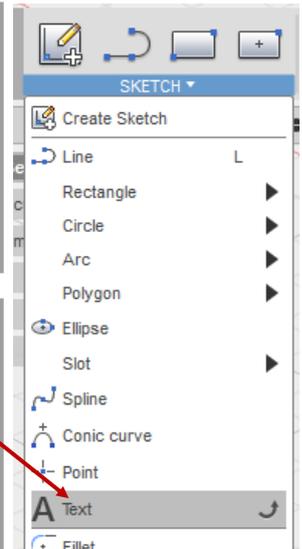
Extruded Cut Through Curved Surface

7) Go to "CONSTRUCT" then select "Plane Tangent to Face at Point".

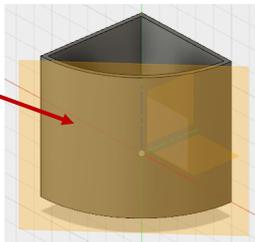


8) Select the inside corner point and then select the curved surface

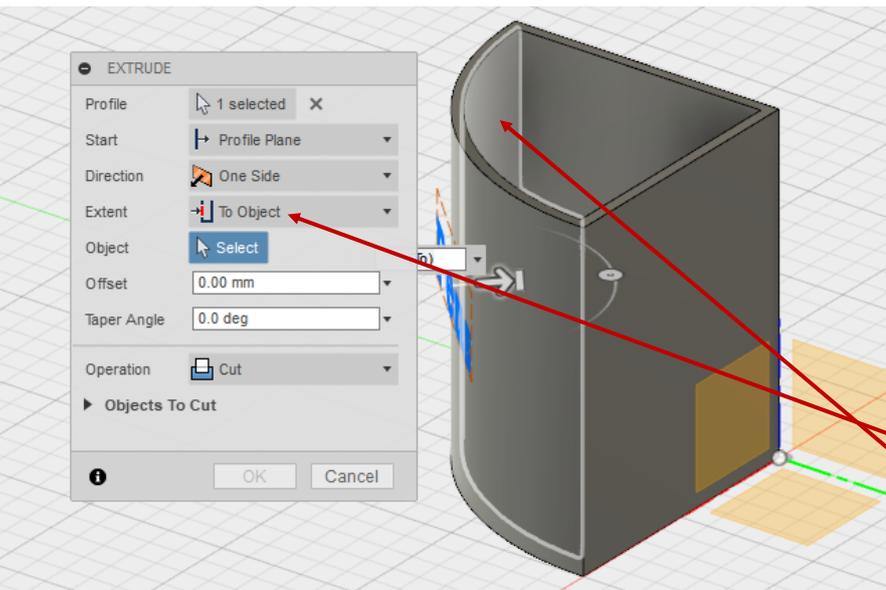
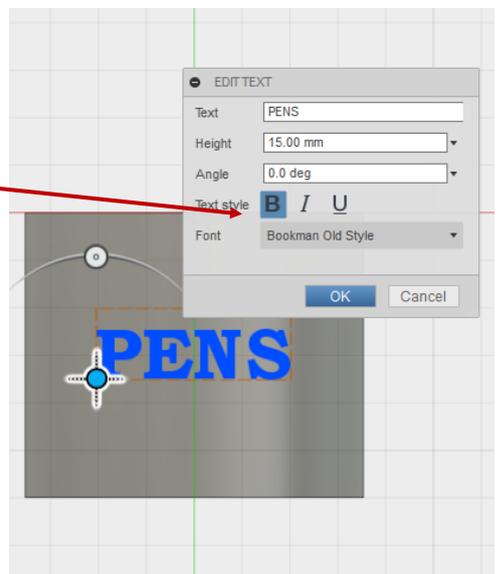
9) Activate "Text" tool in the "SKETCH" drop down menu.



10) Click on tangent plane you just made to start drawing on it.



11) Give a name to this section. I've called mine "PENS" as I wish to put my pens in this sections. Position, size and choose a font for your text. Then Click "OK"

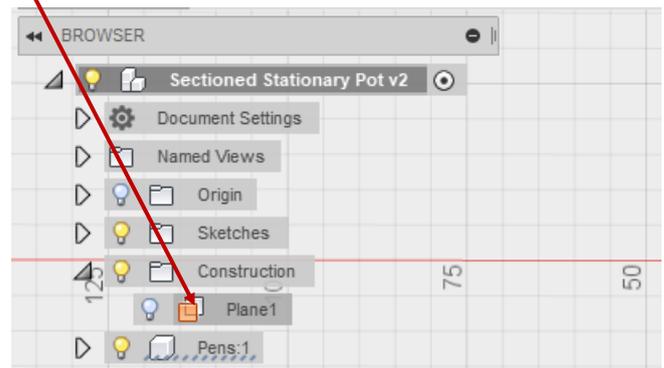
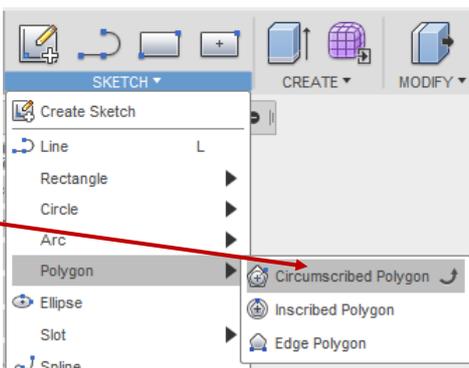


12) Press "E" to extrude the text. On the "Extent" option choose "To Object". Then select the inside curved face. This should cut your text straight through the curved surface. Click "OK".

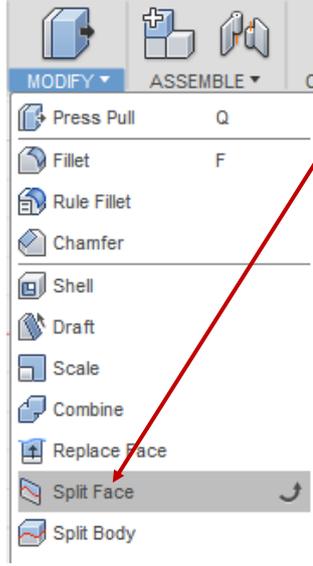
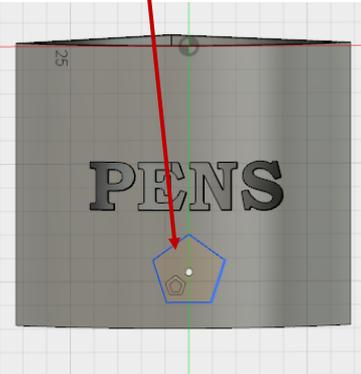
Wrapped Cut Through Curved Surface

13) Now add a design to your section. I'm choosing to add a pentagon by go to "Sketch" - "Polygon" - "Circumscribed Polygon".

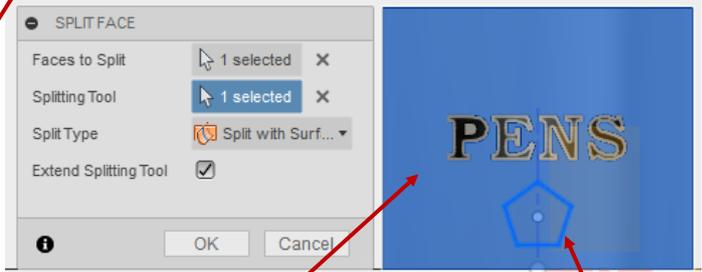
14) Then select the construction plane you made by finding it in the "Construction" folder in the "Browser".



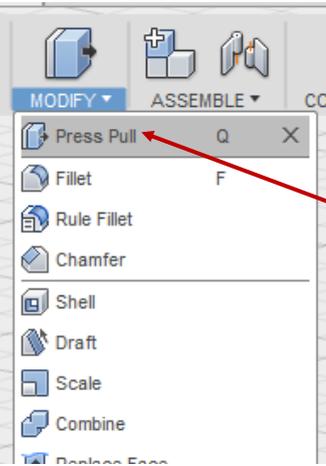
15) Then draw and position your shape somewhere on the section.



16) To wrap the shape onto the curved surface, go to "MODIFY" then select "Split Face".

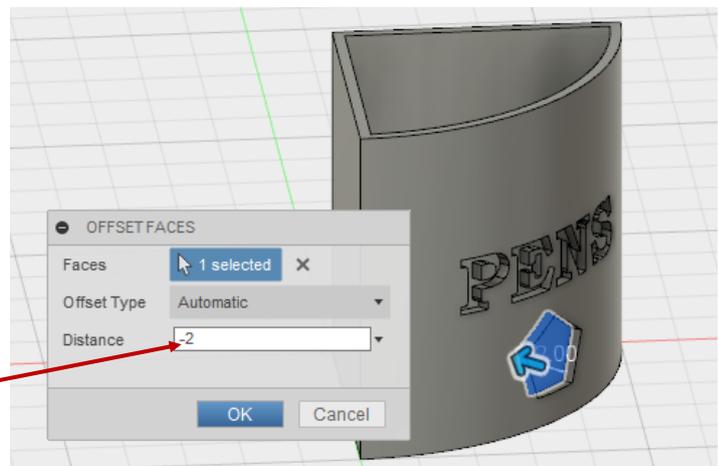


17) Select the outside curved surface as the "Faces to Split", then select the outline of your shape as the Splitting Tool. Click "OK".



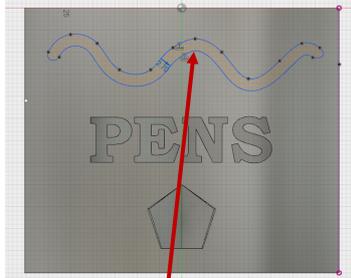
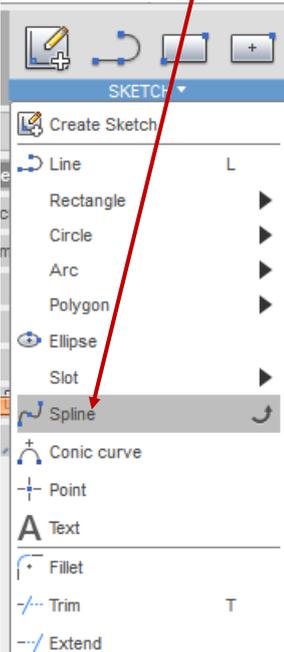
18) Activate the press pull tool by pressing "Q" on your keyboard or by going to "MODIFY" the "Press Pull".

19) Select the face of your shape then set the distance to -2mm. Click "OK".



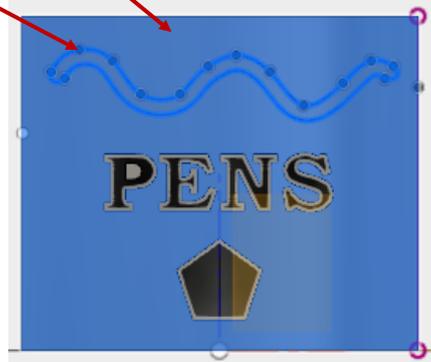
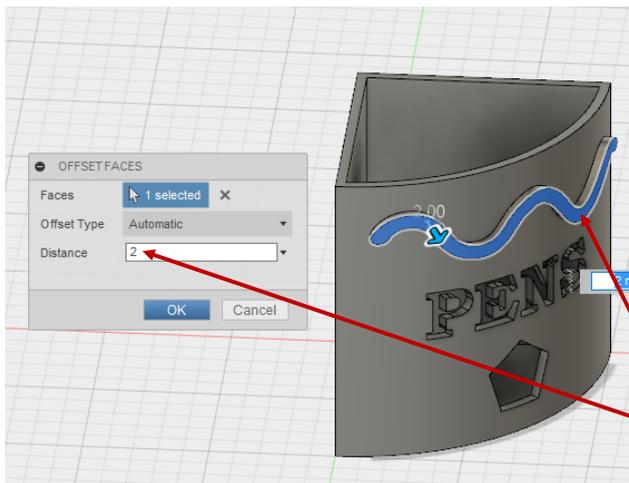
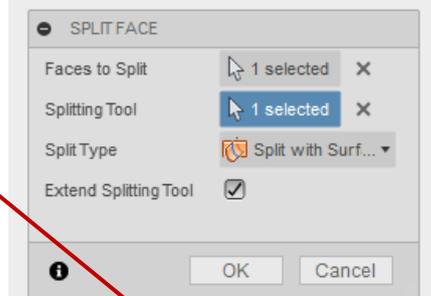
Wrapped Extrude Through Curved Surface

20) Use the spline tool to add another design to this section.



21) Create a spline design on the section.

22) Initiate the "Split Face" tool in the "MODIFY" menu. Select the curved surface as the face then the spline design outline as the splitting tool. Click "OK".



23) Press "Q" to initiate the "Press Pull" tool. Then select the face of your spline design. Set the distance to 2mm. Click "OK".

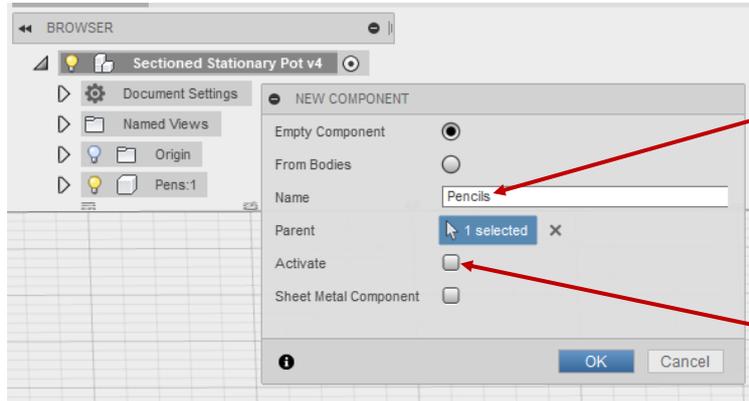
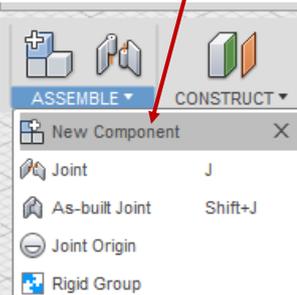
Using the Timeline to Create Copies of the Blank Section

We want to create another section like the one we just made, except we want to have a different design on it. It will be easier to copy the section we have already made rather than creating it from scratch. However if we copy the section like it is now then it will have all the designs we created on it. Therefore we need to scroll back in the timeline to when the section was blank and copy it into a new component from there.

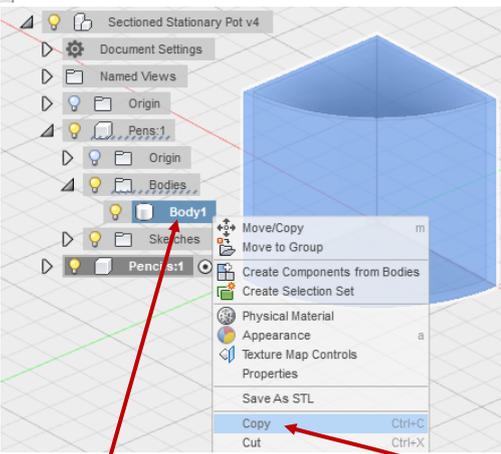
24) Drag the timeline bar back until you have a blank section, i.e. no text or designs.



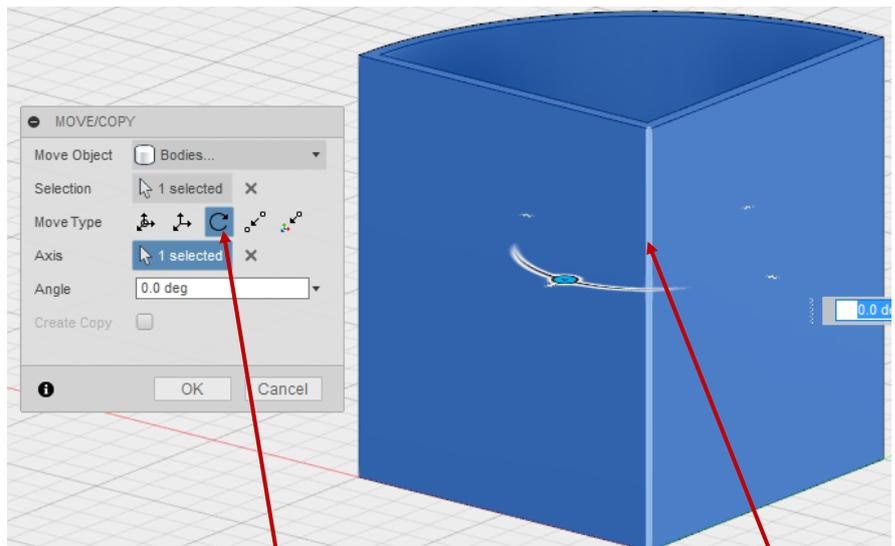
25) Create a "New Component"



26) Give this component another name. I've called mine "Pencils". Ensure the "Parent" option is the overall assembly (the folder at the top of the browser). Untick the "Activate" option. Click "OK".

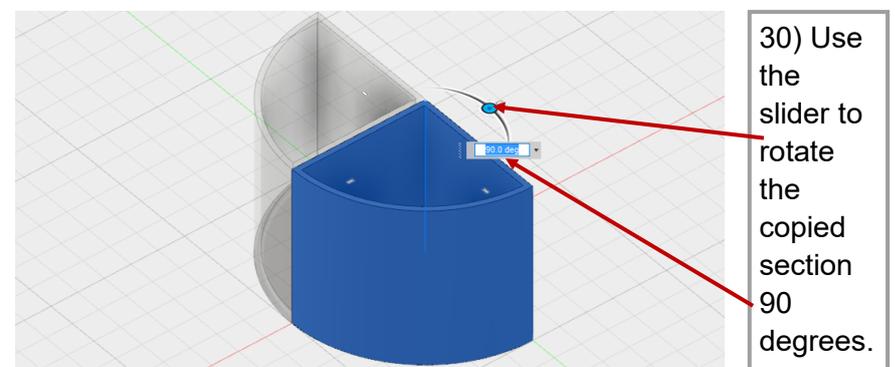
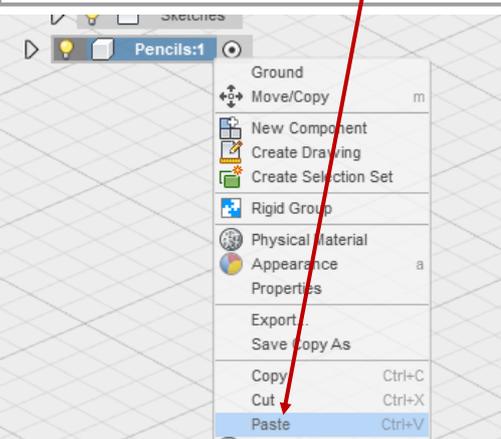


27) Go into your first component, open the "Bodies" folder then right click "Body1" and select "Copy".



29) Select the rotate option on the "Move Type", then click on the vertical line at the pointed end of the section.

28) Right click on your new component and select "Paste" to create a copy of the body.



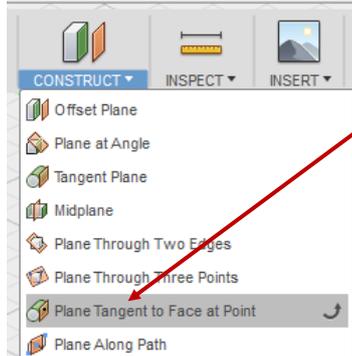
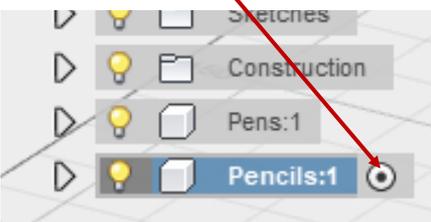
30) Use the slider to rotate the copied section 90 degrees.



31) Hit the "To End" button on the timeline to move the timeline bar back to the end.

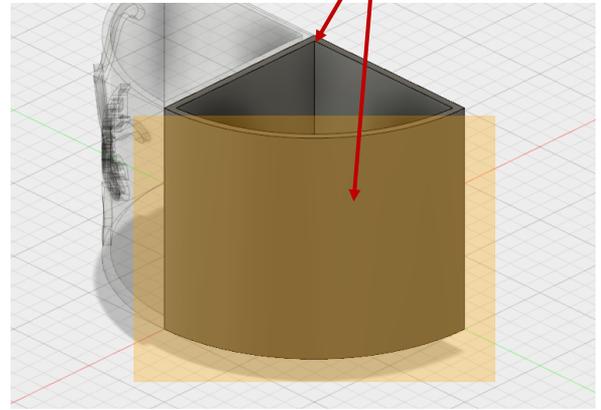
Extruded Text on Curved Surface

32) Activate your new component to start sketching on it.

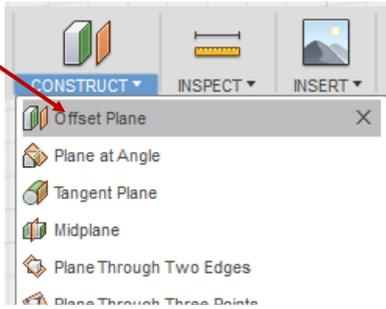


33) Create another "Plane Tangent to Face at Point"

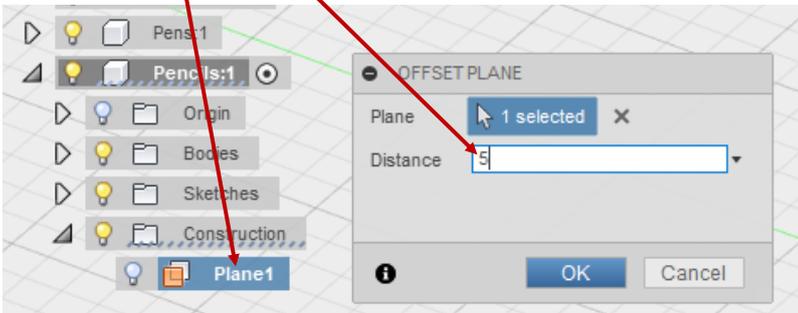
34) Select the inside corner of your section and the front curved face to position your plane.



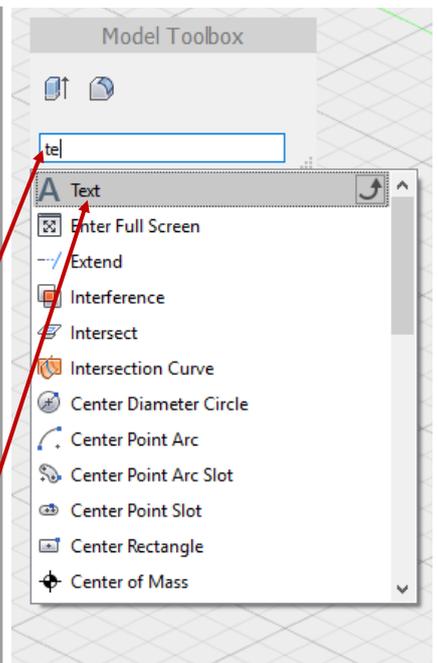
35) Then create an "Offset Plane"



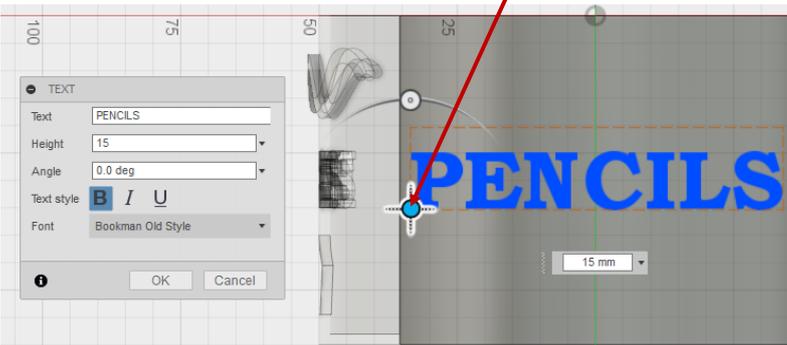
36) Select the "Plane1" in your Construction folder as your reference plane. Then set the distance as 5mm



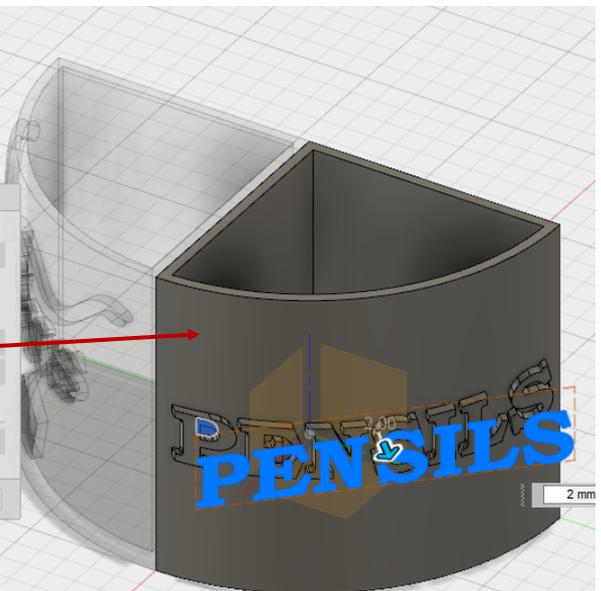
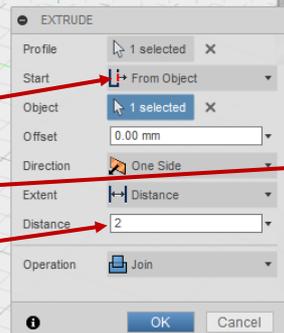
37) Press "S" on your keyboard to bring up the Search Toolbox. Then type "text" to find the text sketching tool. Select the "Text" option.



38) Click on the offset plane you just made. Give your section a name. Don't forget you can change the size and font style in the option box. Use the blue circle to position your text on the section. Click "OK"



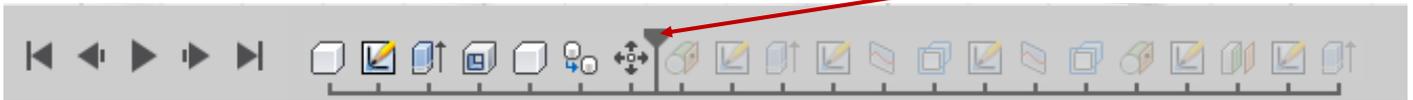
39) Press "E" to extrude. Click on your text to extrude it. Select "From Object" in the "Start" option of the dialog box and select the front curved face. Then type 2mm in the "Distance" option. Ensure the "Operation" is "Join". Click "OK".



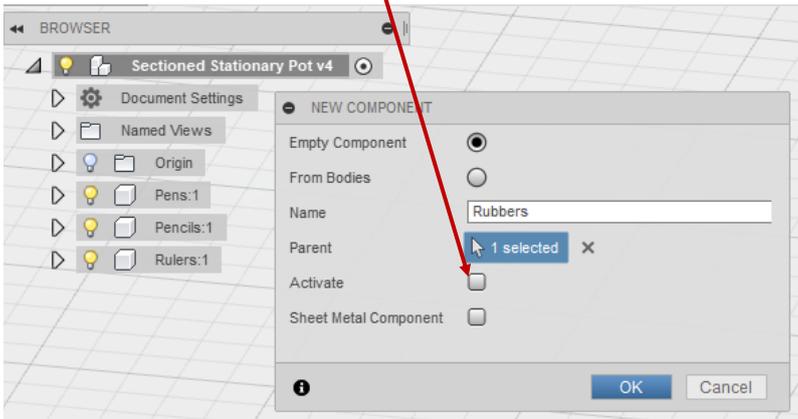
Creating Last Two Sections



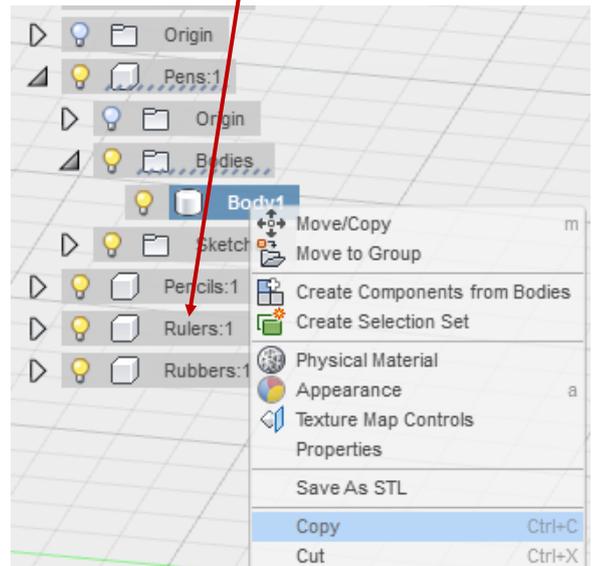
40) We now need to make 2 more components. So activate the overall assembly. Then move the timeline bar back to the when you have your first section blank.



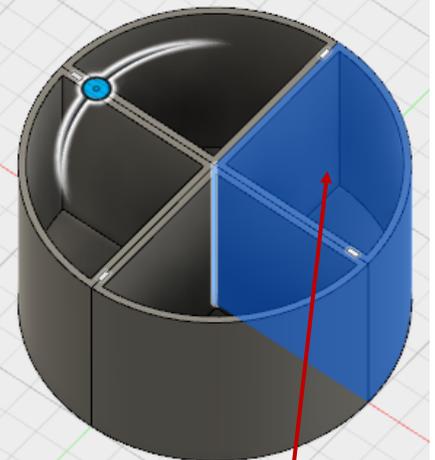
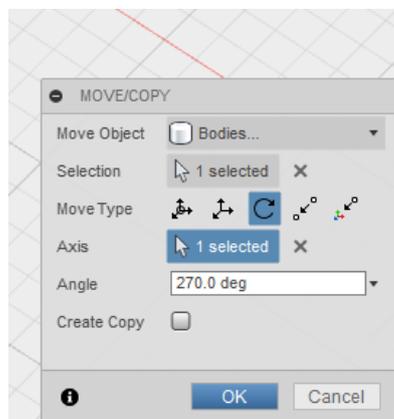
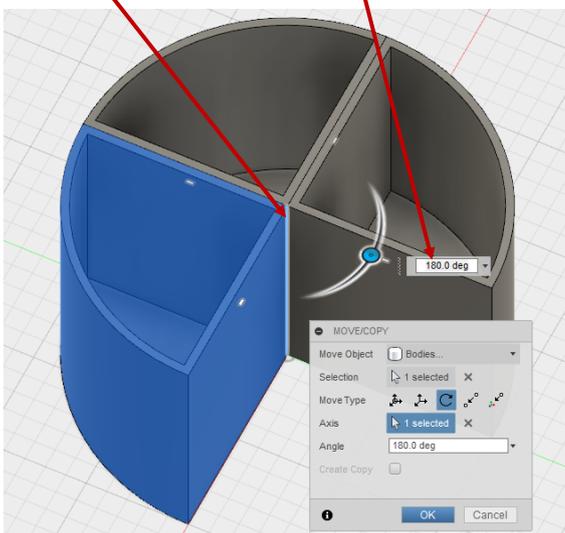
41) Create a new component like you did last time. Give it another name. I've called mine "Rulers". Then create one more component and give it a name. I've called mine "Rubbers". Ensure the "Activate" option is unticked.



42) Copy "Body1" from your first section and paste it in your 3rd component. For me this is my "Rulers" component.



43) Select the rotation option and click on the middle vertical axis. Rotate it 180 degree. Click "OK".



44) Now paste the body into your fourth component. For me this is my "Rubber" component. Then rotate it 270 degrees. Click "OK".



Use the skills you have learnt in this worksheet to design your 3rd and 4th pot sections yourself. Have fun!!

Check out the next tutorial on creating clips for the sections and adding joints.