

Advanced Blender Tools - Edit Mode Basics - Part 2

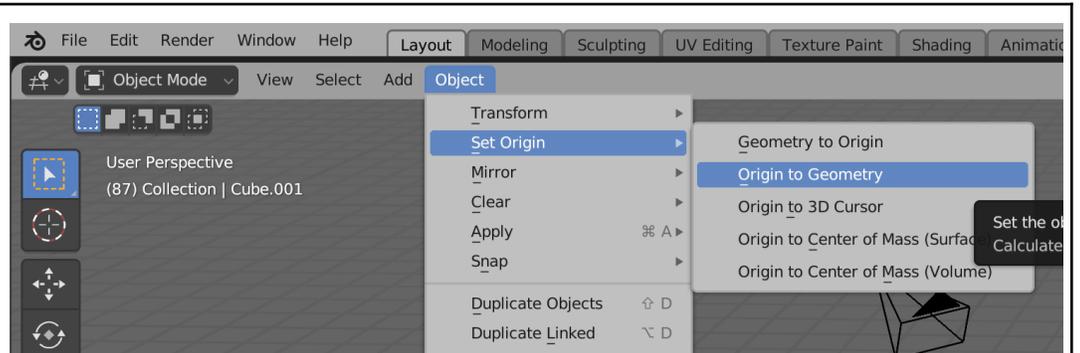
Updated August 2022

Joining and Separating Mesh Objects - Ctrl + J

In order to combine two meshes to be linked together, you would want to select one mesh object, shift click another object and press ctrl + J, and they will be linked together

To unlink them, you want to go to Edit mode, select (in its entirety) the mesh you want to separate. You would then press the 'P' button, and press 'Separate'.

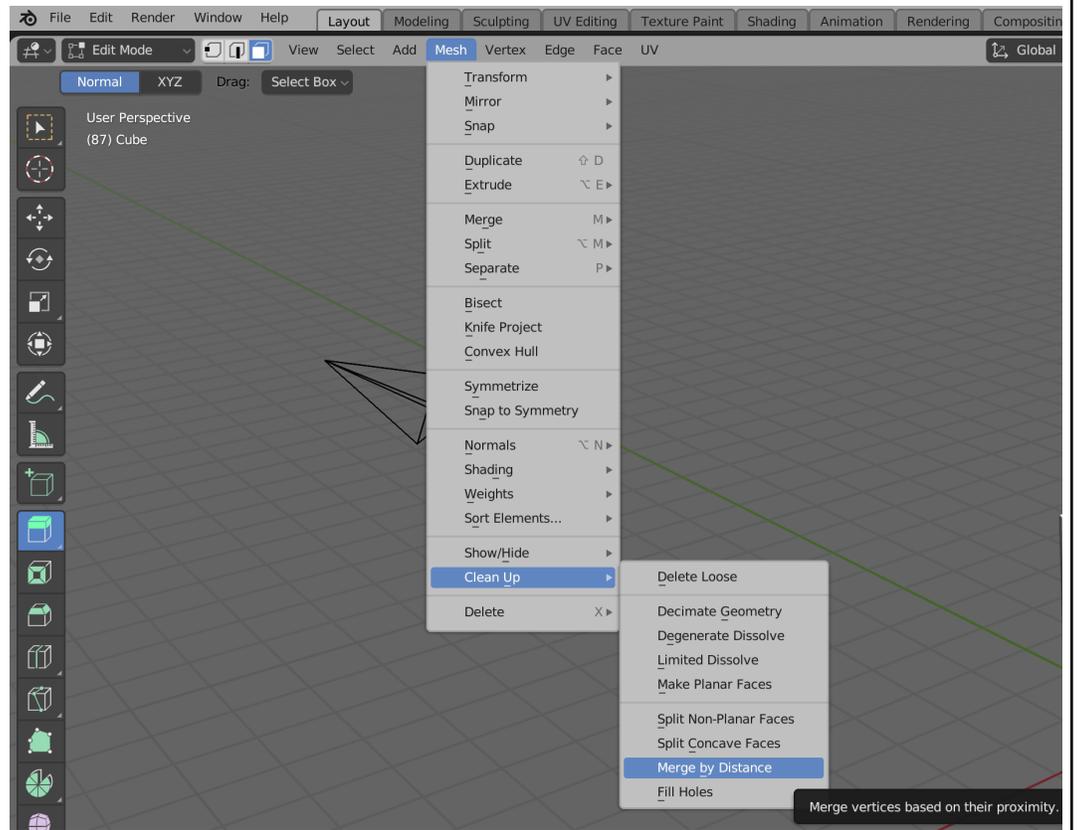
Now if you go back to Object mode, you can move your object separately from the other. However, the origin is messed up! So you have to go to the top of the screen, press 'Object' → 'Set Origin' → 'Origin to Geometry' (See Picture)



Removing Doubles

Removing Vertices in the exact same location (because you made a mistake!)

Head to edit mode, and be sure to be in 'Vertex Mode'. Be sure to select all the vertices (Press 'A' to select all) and then go to Mesh → Clean Up → Merge By Distance



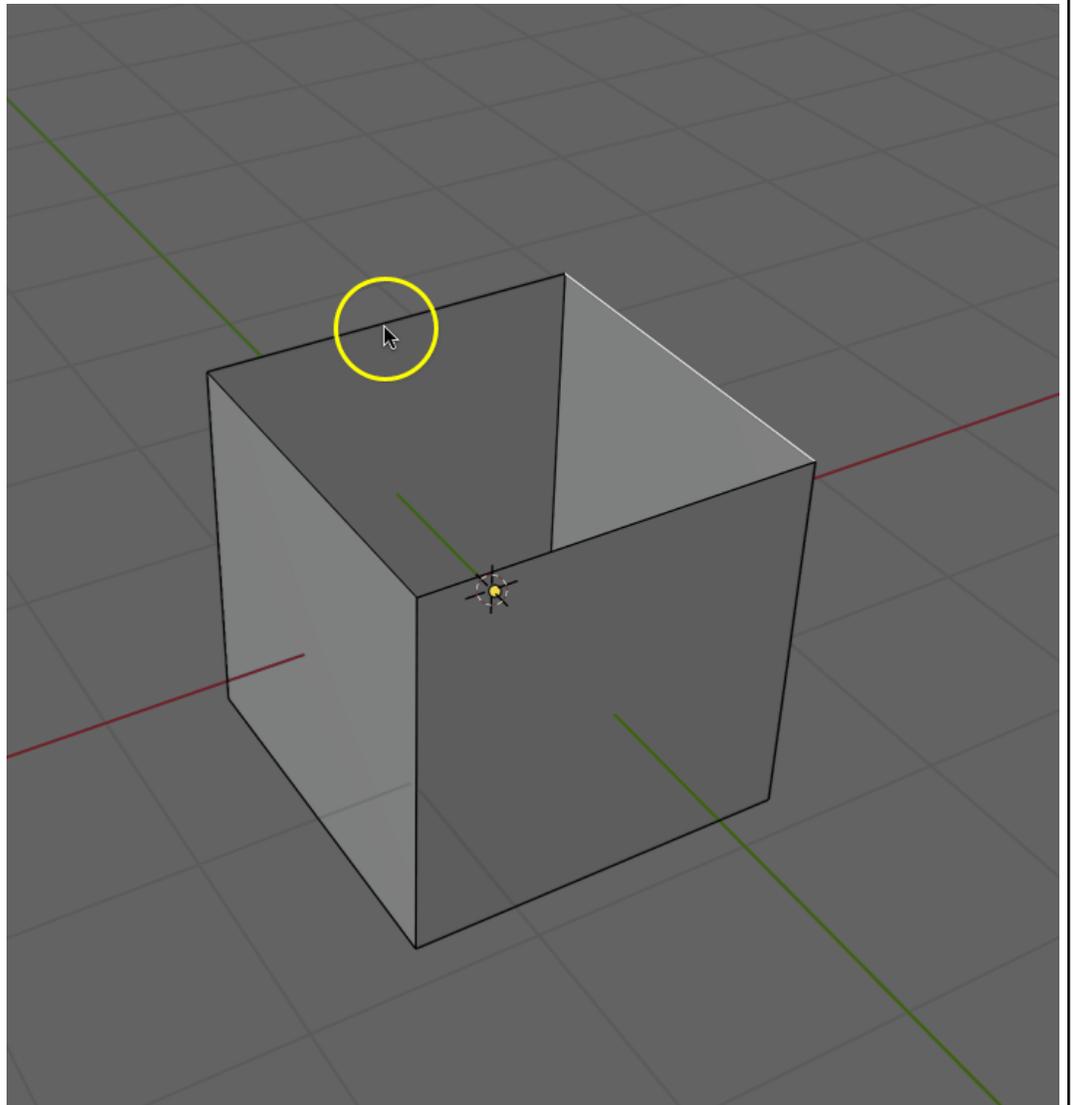
Fill Tool

If you find that a face of a mesh has mysteriously vanished, you can fill the gap!

Go to Edit, and in 'Edge Mode' you can select all the edges surrounding the gap, and press 'F'. You'll find Blender will automatically fill the gap!

If you're dealing with a mesh that's a bit more complicated and has many edges (like the top or bottom face of a cylinder) then you may want to press 'Alt+F' as it will fill it with not 'N-Gons', and make it easier for 3D Printing, or Game Design Rendering.

You can also use 'Grid Fill' by going to 'Face' at the top toolbar, and going down to 'Grid Fill'. This will fill the face with grids, instead of Triangles as would be done with an Alt+F function.



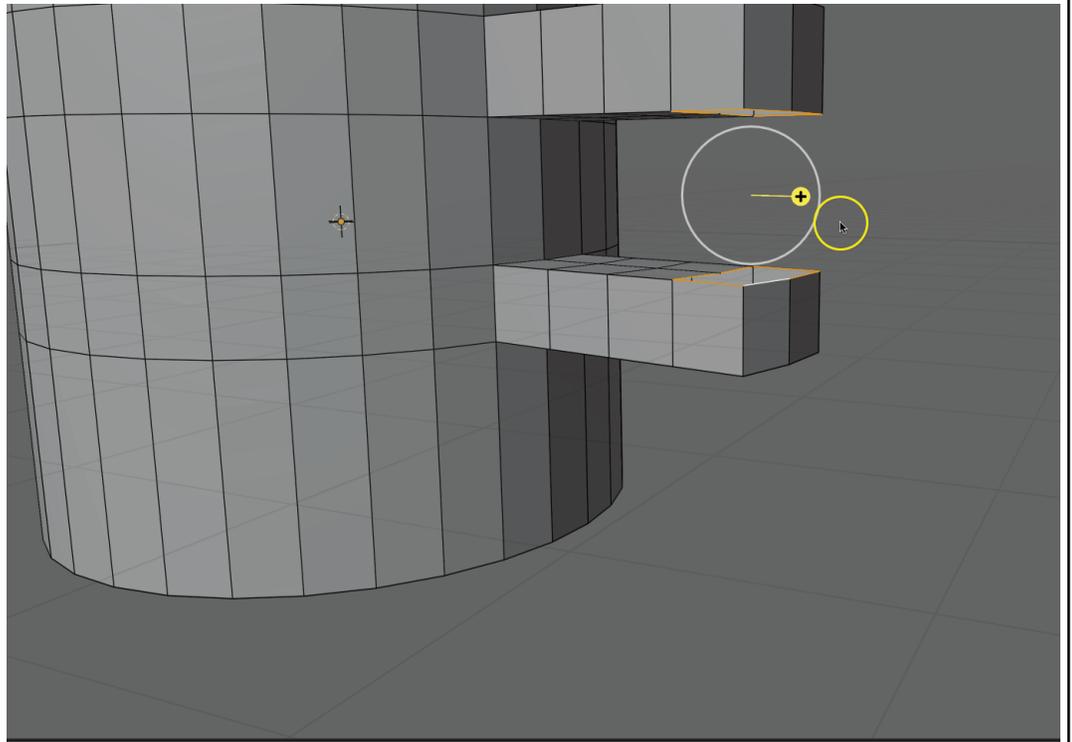
Bridge Edge Loops

Alright, let's say you're at a point in your design where you have to merge two sections together. You may want to simply extrude a section out, but that's not great geometry, and could make for messy printing / game design.

So what you're going to want to do is delete the two opposing sides faces, leaving two open holes.

Once you have two open holes, go to the 'Edge Tool' and select all the edges that surround both sides of what you're wanting to connect. Once you've done that, then right click the selection and choose 'Bridge Edge Loops', and Blender will automatically bridge the selection for you.

If you find that Blender didn't connect the vertices correctly, you can go to the advanced toolbar on the bottom right hand corner and play with the 'Twist' option.

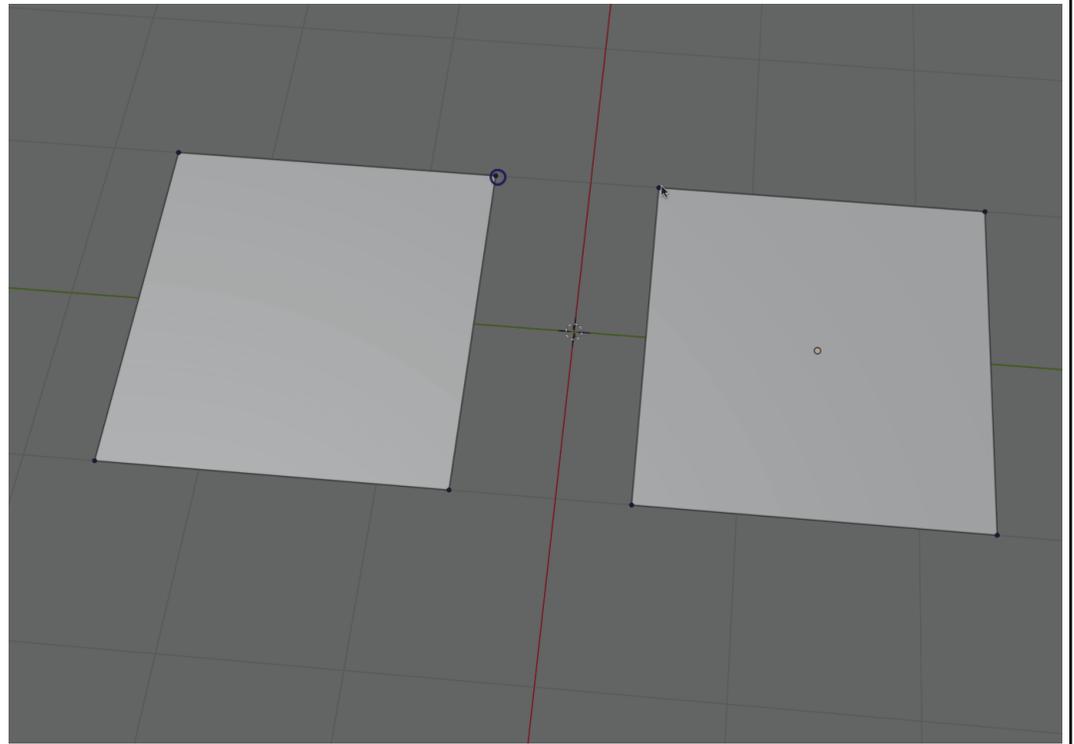


Merging Vertices

If you ever need to join one mesh object's vertices together, you can do so by going into Edit Mode, and being in 'Vertex Mode'.

You'd want to shift and select two vertices, right click them and select 'Merge Vertices', and choose the selection that works best for what you need it for.

Note: Objects must be joined together in order for them to be merged.



Snapping & Auto Merge

Alright, let's say in some crazy world you've managed to lose some faces off of your UV Mesh, we may need to fix our UV Mesh! (Figure 1)

You can't fill it, you can't alt+f it, you can't quite extrude easily and fear making too many doubles... So what can we do?

Well, there is a way!

At the very top of your 3D Viewport is a little magnet called 'Snapping' and to the top right hand corner is a little... solar system? And that's called 'Auto Merge Vertices'. Let's make sure both of those are turned on (Figure 2 & 3) and that you

Figure 1

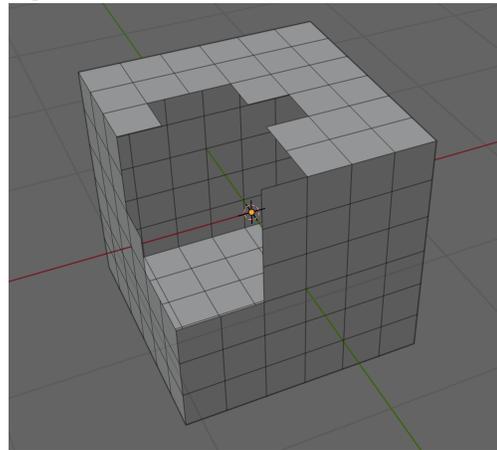
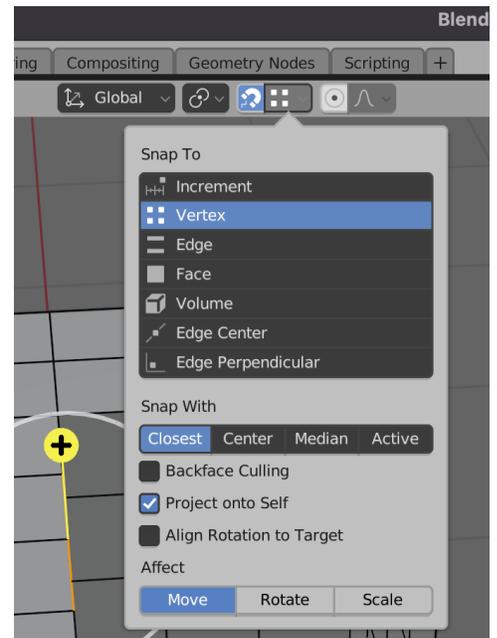
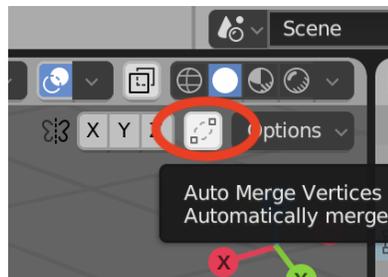


Figure 2 & 3 →



have set your 'Snap' to 'Vertex' by pressing the option bar to the exact right of it.

Once you have that, you can head into Edit Mode, and select edges that you want to extrude outward. And you'll find that your extrusion will snap to the correct locations without any doubles!

Note: I recommend extruding freely! You can do so by pressing 'E' when you have edges selected!

