5.2.6.7 Modeling - Meshes - Editing - Faces

Face Tools

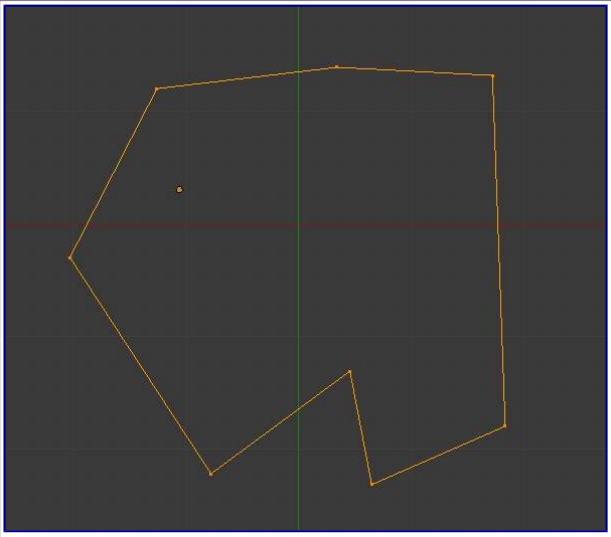
These are tools that manipulate faces.

Creating Faces

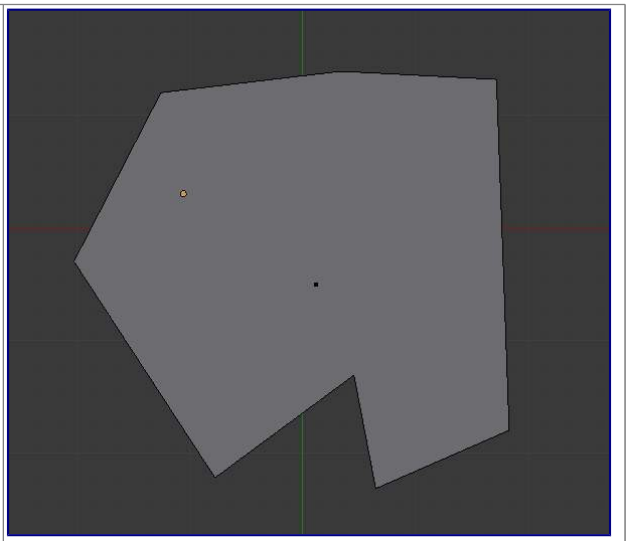
Make Edge/Face

Reference
Mode: *Edit* mode Menu: Mesh ‣ Faces ‣ Make Edge/Face Hotkey: F

This will create an edge or some faces, depending on your selection. Also see *Make Edge/Face*.



A closed perimeter of edges

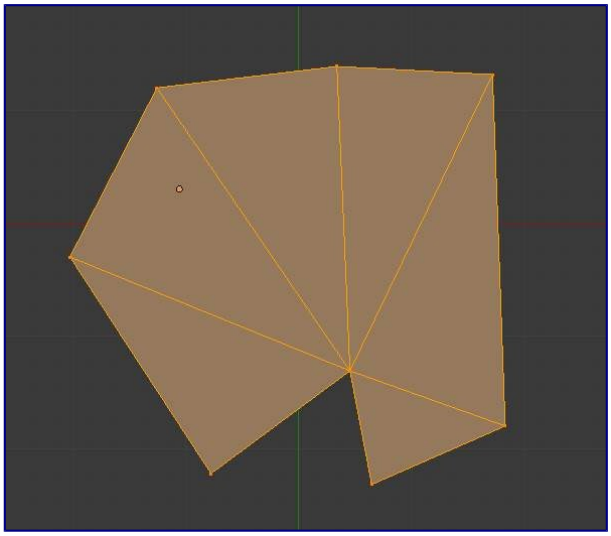


Filled using fill

Fill

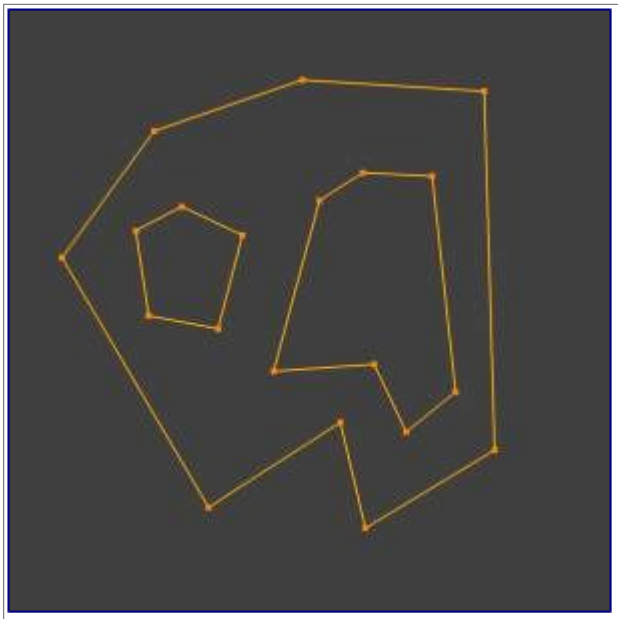
Reference
Mode: *Edit* mode Menu: Mesh ‣ Faces ‣ Fill/Beautify Fill Hotkey: `Alt-F`

The *Fill* option will create *triangular* faces from any group of selected edges or vertices, *as long as they form one or more complete perimeters*.

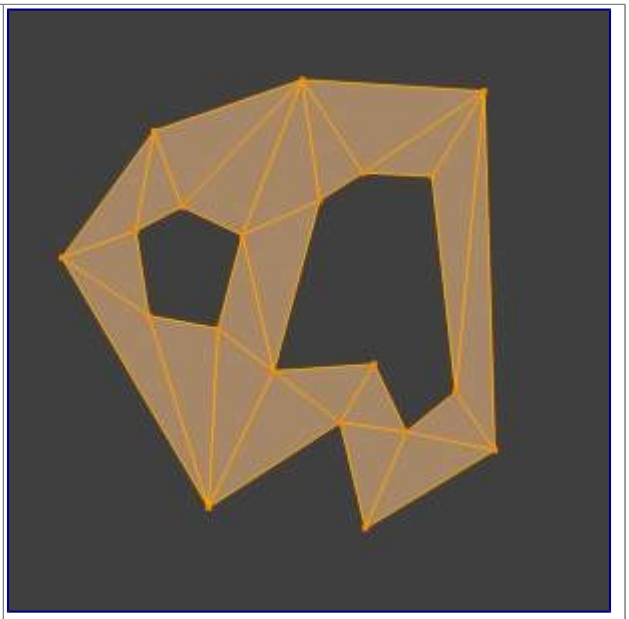


Filled using fill

note, unlike creating n-gons, fill supports holes.



A closed perimeter of edges with holes



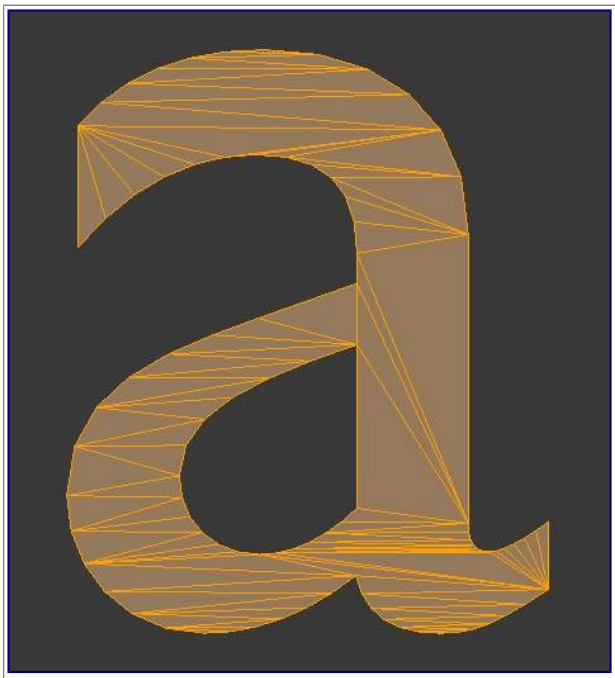
Filled using fill

Beauty Fill

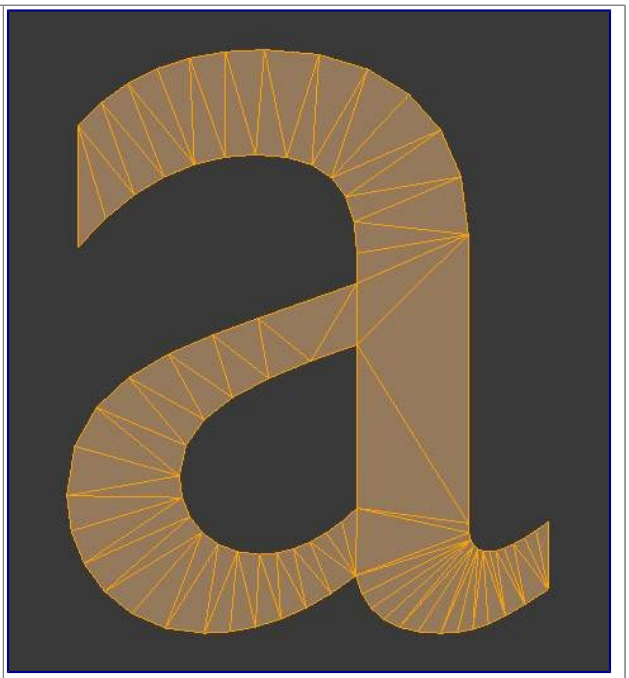
Reference

Mode: *Edit* mode
Menu: Mesh ‣ Faces ‣ Fill/Beautify Fill
Hotkey: `Alt-Shift-F`

Beautify Fill works only on selected existing faces. It rearrange selected triangles to obtain more “balanced” ones (i.e. less long thin triangles).



Text converted to a mesh



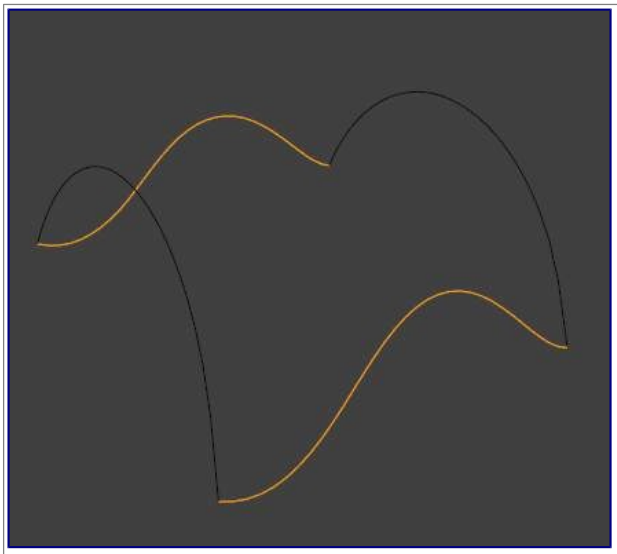
Result of Beauty Fill, Alt-Shift-F

Grid Fill

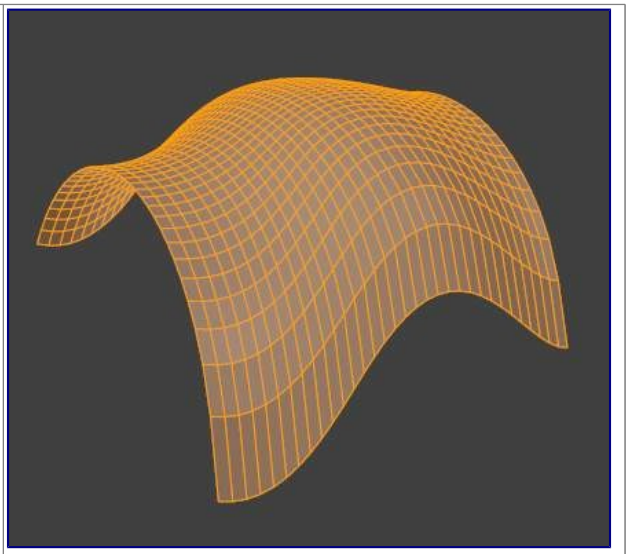
Reference

Mode: *Edit* mode
Menu: Mesh ‣ Faces ‣ Fill/Grid Fill

Grid Fill uses a pair of connected edge-loops to fill in a grid that follows the surrounding geometry.



Input



Grid Fill Result

Convert Quads to Triangles

Reference
Mode: *Edit* mode Menu: Mesh ‣ Faces ‣ Convert Quads to Triangles or Face Specials ‣ Triangulate Hotkey: `Ctrl-T`

As its name intimates, this tool converts each selected quadrangle into two triangles. Remember that quads are just a set of two triangles.

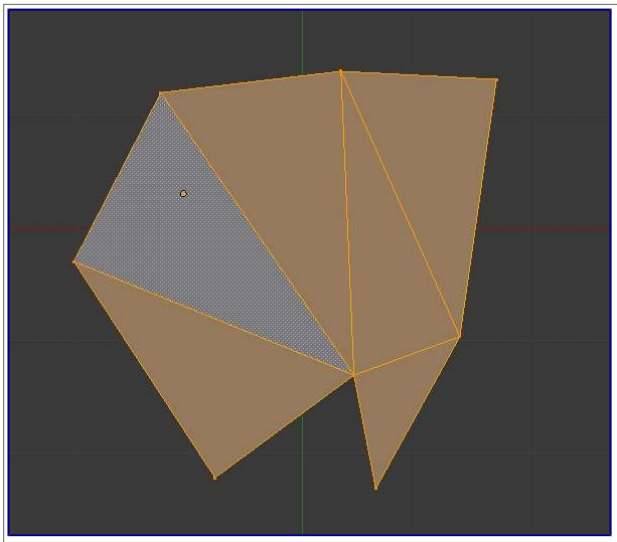
Convert Triangles to Quads

Reference
Mode: *Edit* mode Panel: *Mesh Tools* (*Editing* context) Menu: Mesh ‣ Faces ‣ Convert Triangles to Quads Hotkey: `Alt-J`

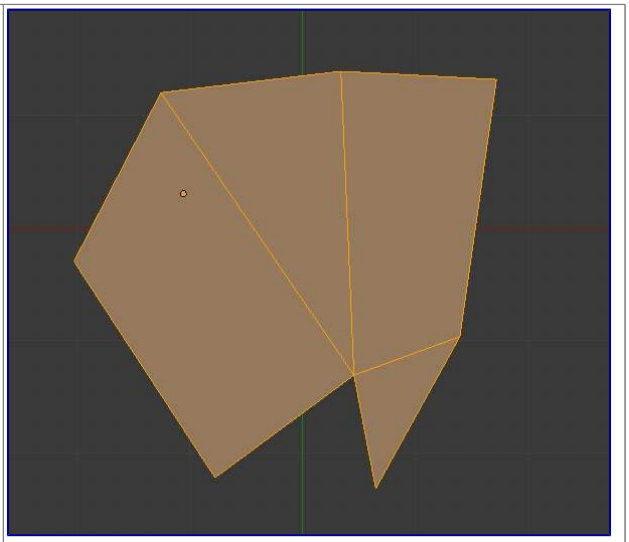
This tool converts the selected triangles into quads by taking adjacent tris and removes the shared edge to create a quad, based on a threshold. This tool can be performed on a selection of multiple triangles.

This same action can be done on a selection of 2 tris, by selecting them and using the shortcut F, to create a face, or by selecting the shared edge and dissolving it with the shortcut [X] ‣ Dissolve.

To create a quad, this tool needs at least two adjacent triangles. If you have an even number of selected triangles, it is also possible not to obtain only quads. In fact, this tool tries to create “squarishest” quads as possible from the given triangles, which means some triangles could remain.



Before converting tris to quads



After converting tris to quads

All the menu entries and hotkey use the settings defined in the *Mesh Tools* panel:

Max Angle
: This values (between **0** and **180**) controls the threshold for this tool to work on adjacent triangles. With a threshold of **0.0**, it will only join adjacent triangles that form a perfect rectangle (i.e. right-angled triangles sharing their hypotenuses). Larger values are required for triangles with a shared edge that is small, relative to the size of the other edges of the triangles.

Compare UVs
: When enabled, it will prevent union of triangles that are not also adjacent in the active UV map. Note that this seems to be the only option working...

Compare Vcol
: When enabled, it will prevent union of triangles that have no matching vertex color. I'm not sure how this option works - or even if it really works...

Compare Sharp
: When enabled, it will prevent union of triangles that share a "sharp" edge. I'm not sure either if this option works, and what is the "sharp" criteria - neither the *Sharp* flag nor the angle between triangles seem to have an influence here...

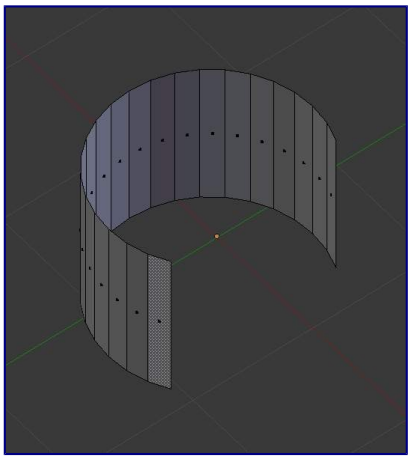
Compare Materials
: When enabled, it will prevent union of triangles that do not use the same material index. This option does not seem to work neither...

Solidify

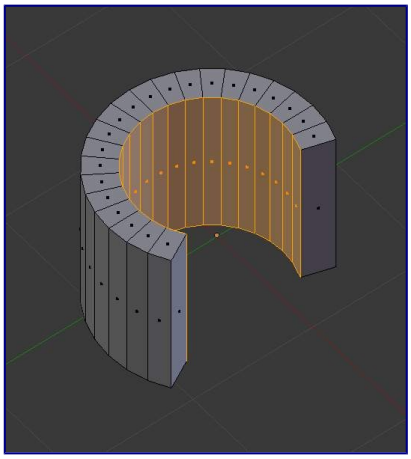
Reference
Mode: *Edit* mode Menu: Mesh ‣ Faces ‣ Solidify Hotkey: [ctrl][F] ‣ Solidify

This takes a selection of faces and solidifies them by extruding them uniformly to give volume to a non-manifold surface. This is also available as a *Modifier*. After using the tool, you can set the offset distance in the Tool Palette.

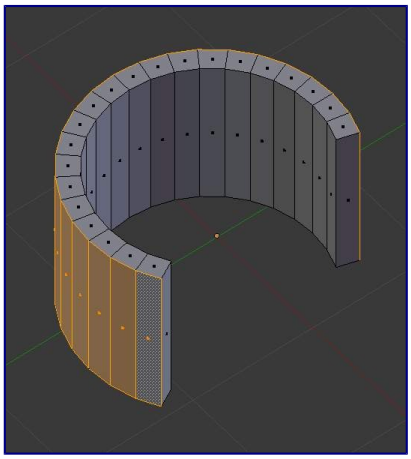
Thickness
: Amount to offset the newly created surface. Positive values offset the surface inward relative to the normals. Negative values offset outward.



Mesh before solidify operation



Solidify with a positive thickness



Solidify with a negative thickness

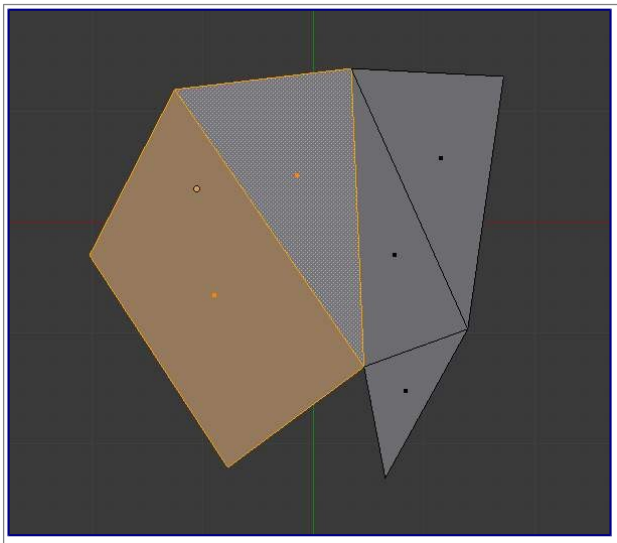
Rotate Edges

Reference
Mode: *Edit* mode

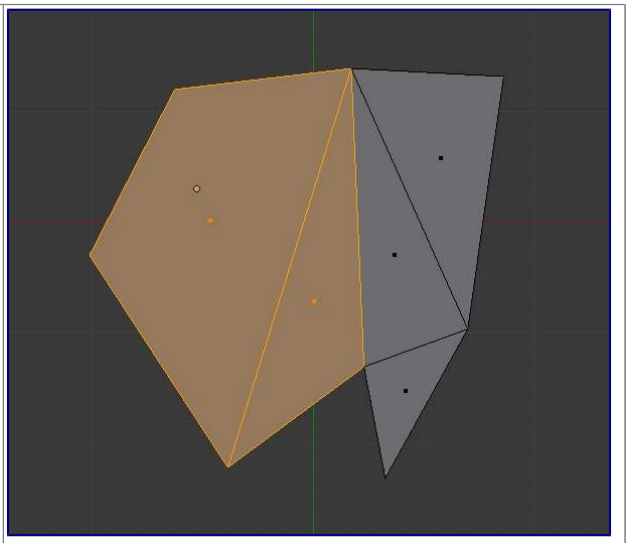
Menu: Mesh ‣ Faces ‣ Rotate Edge CW

This command functions the same edge rotation in edge mode.

It works on the shared edge between two faces and rotates that edge if the edge was selected.



Two Faces Selected



Full Render

See Rotate Edge for more information.

Normals

See Editing Normals for more information.