Surface modelling

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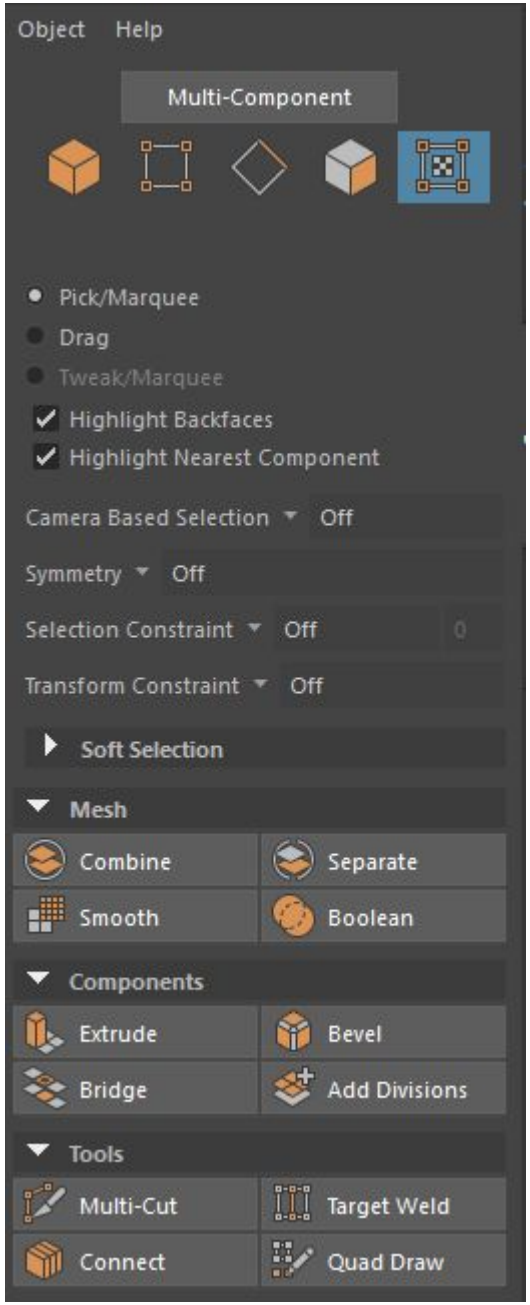
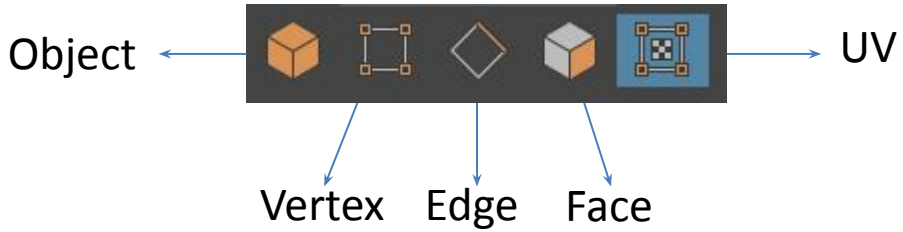




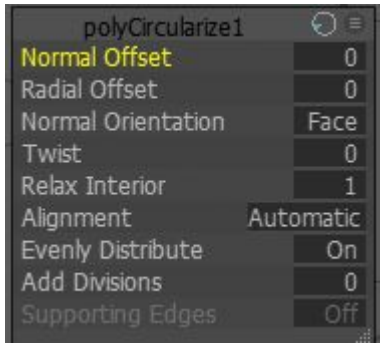
Multi-component mode lets you select faces, vertices, and edges without changing between selection modes. In this mode, you select components based on the cursor's proximity to them.

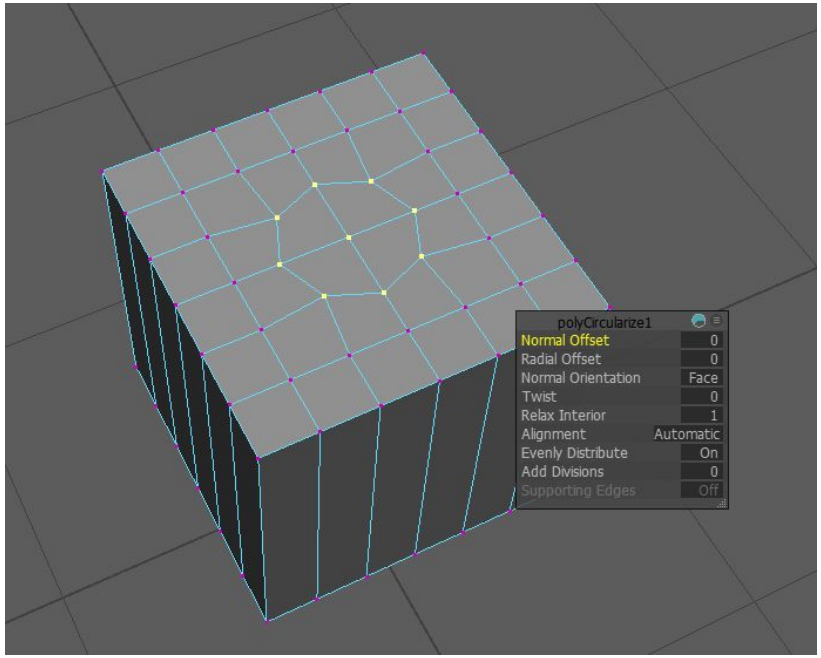
To turn on multi-component selection mode for selecting one object at a time, do one of the following:

- Press F7.
- Right-click when the cursor is over a polygonal object and then select Multi from the pop-up menu.
- Open the Modeling Toolkit, and then click Multi-Component near the top of the panel.
- On the main menu, click Select > Components > Multi-Component.

Circularize components

Circularizing vertices, edges, or faces reorganizes them into a perfect circle using the selection's center as the circle's center.





To circularize part of a mesh

Select a set of vertices, edges, or faces on the mesh.

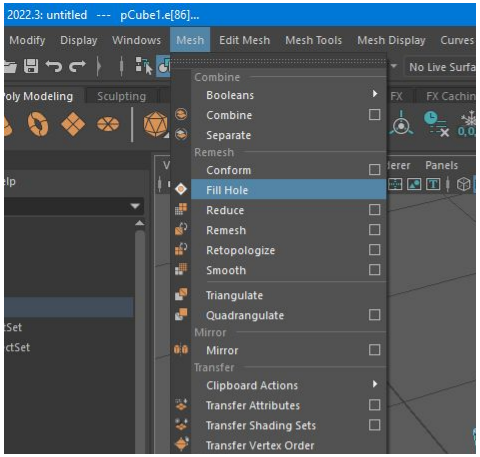
- For vertices: You must select at least three vertices. The number of selected vertices will determine the shape of the circularized area (i.e. three creates a triangle, four creates a square, five creates a pentagon, etc).
- For edges: Circularize is performed on each closed edge loop.
- For faces: Circularize is performed on each set of faces that share at least one common edge.

Select Edit Mesh > Circularize from the Modeling menu set, or Shift + right-click and select Circularize Components.

The selected components are converted into a circle.

Fill holes in a polygon mesh

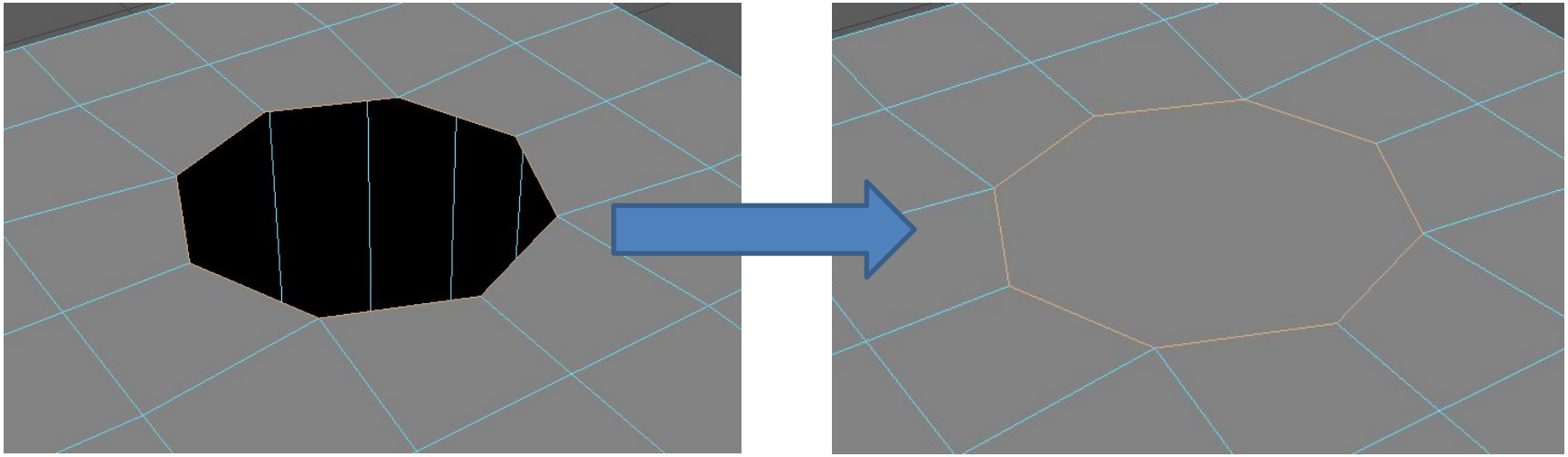
The Fill Hole feature lets you automatically create a three or more sided face to fill an open area on a polygon mesh. The open area must be surrounded by closed border edges.



To fill holes in polygons

Select the border edge you want to fill

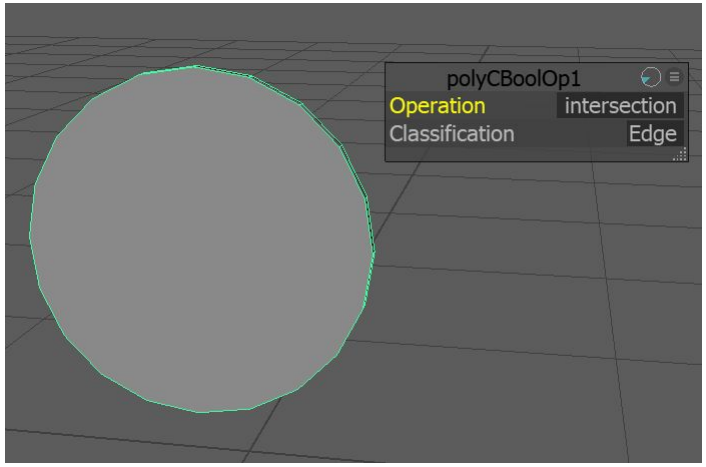
Select Mesh > Fill Hole.



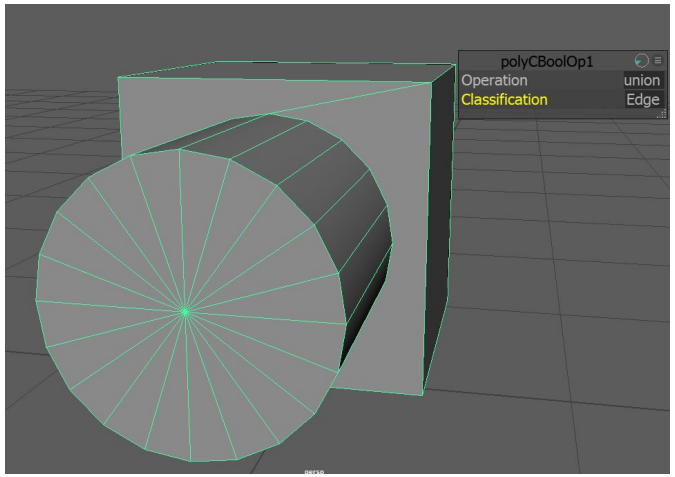
Tip: To highlight border edges, select Display > Polygons > Border Edges.

Booleans

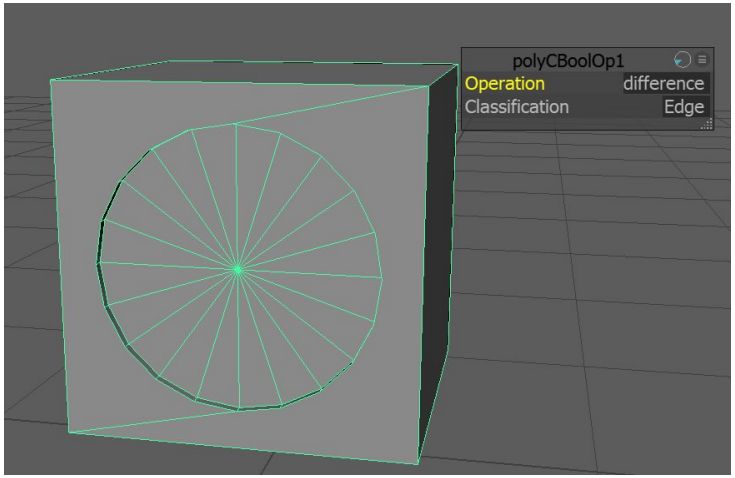
Booleans (Mesh > Booleans) let you model with polygonal objects. Three boolean operations let you combine objects to make shapes that would otherwise be difficult to model using other techniques. You can add, subtract, or intersect objects to create a new, complex shape.



Intersection



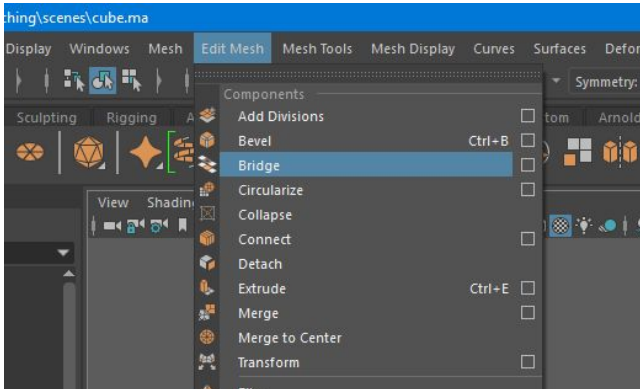
Union



Difference

Bridge Command

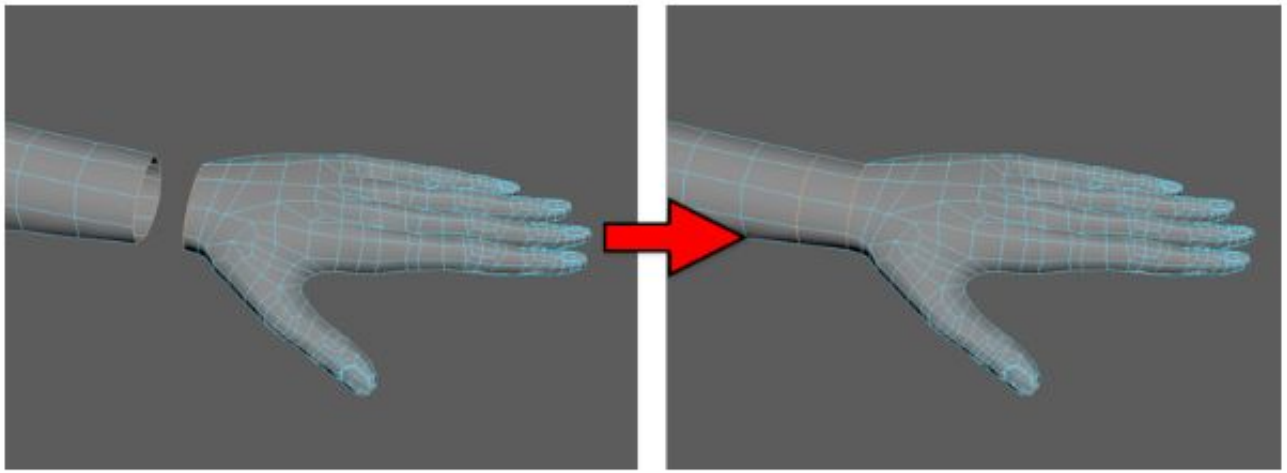
You can construct faces between pairs of border edges using the Bridge command. The resulting bridged faces are merged into the original mesh. Bridge is useful when you need to connect two sets of edges together with a piece of mesh.



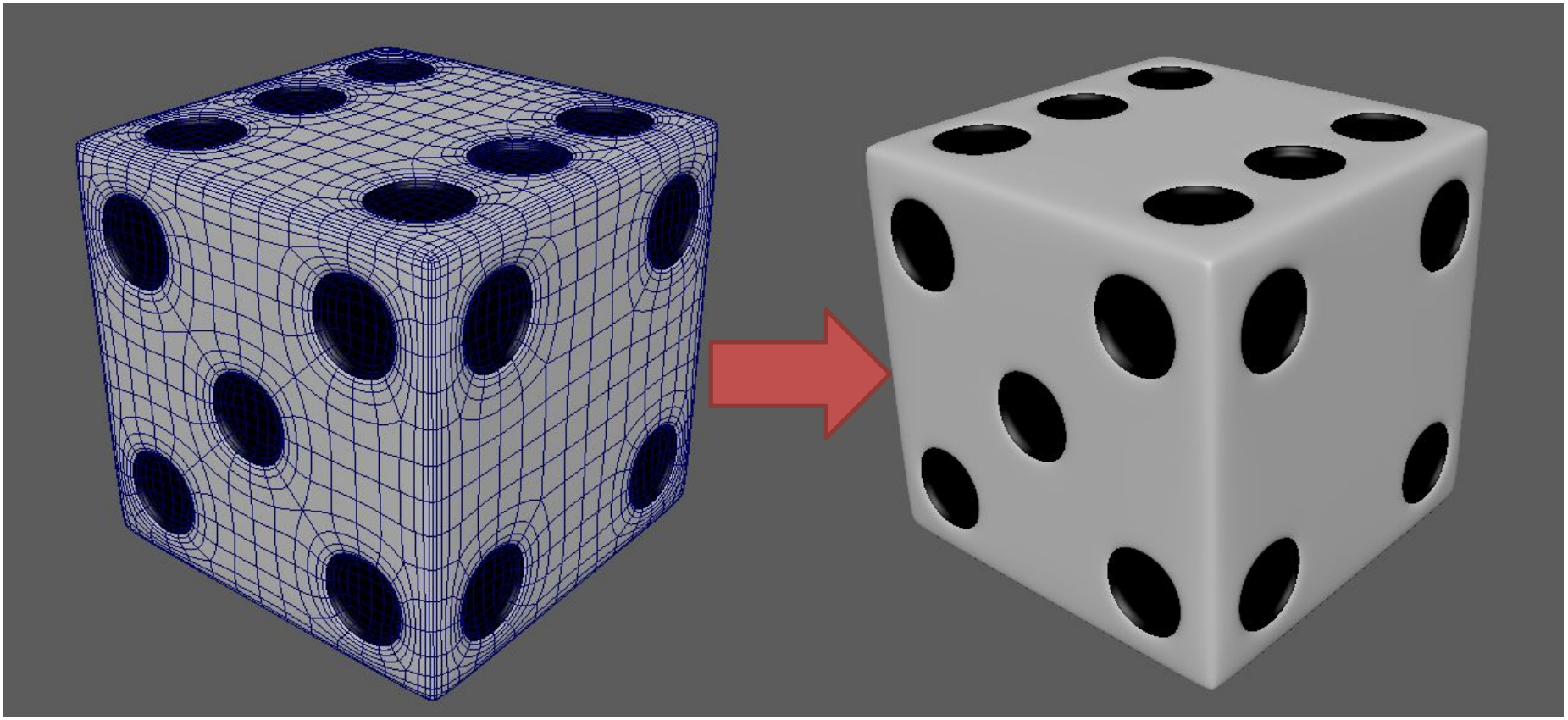
Use one of the following methods to access the Bridge command:

- Select Edit Mesh > Bridge in the main menu bar
- Select Bridge from the marking menu (Shift + right-click)
- Click 

n the Modeling Toolkit



Exercise



Homework #5