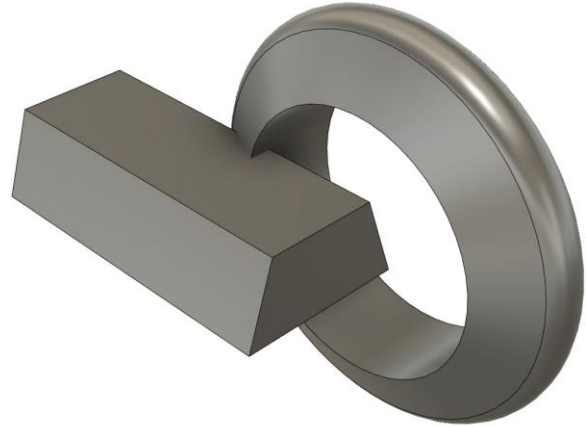


Lesson: Spin a Sketch to Make a Solid

In this lesson, you'll revolve a 2D sketch profile around an axis to create a 3D geometry.

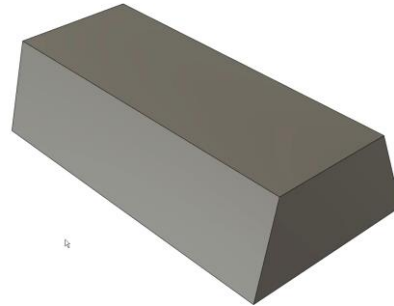
Learning Objectives

- Use Revolve.

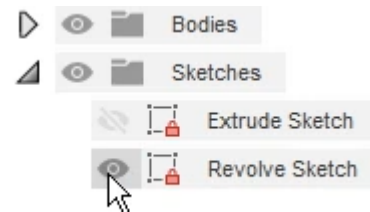


The completed exercise

1. Continue with the *Basics of Fusion* file from the previous module.



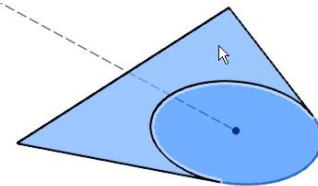
2. Click the eyeball icon next to the Browser's Revolve Sketch to toggle its visibility.



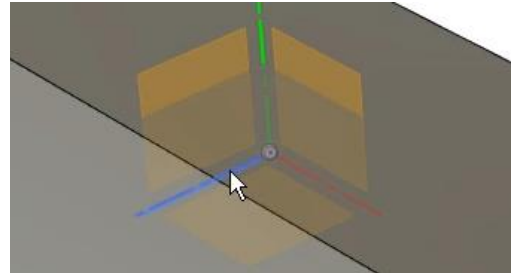
3. A sketch's geometry can be used to revolve solid geometry around an axis. Click Create> Revolve.



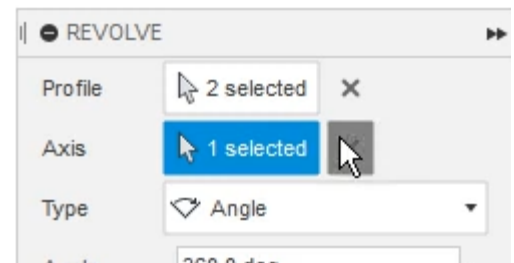
4. For the dialog's Profile selection, choose the two regions inside the sketch shown in the image on the right.



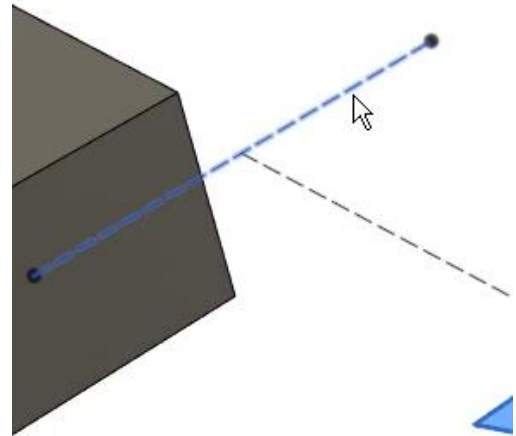
5. For the dialog's Axis selection, choose any straight edge. Choose the Z axis and notice how the sketch is used to create solid geometry that is revolved around the Z axis.



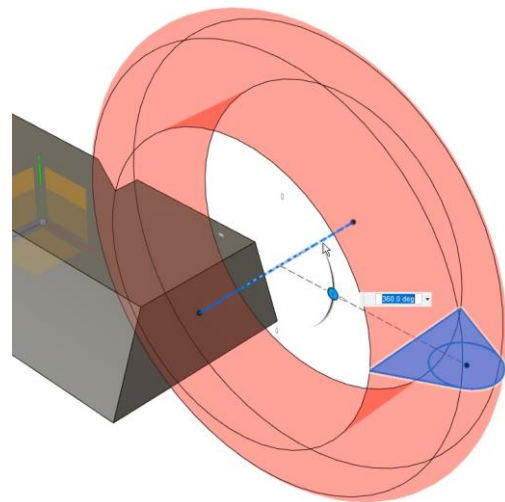
6. Clear the Axis selection by clicking the X in the dialog.



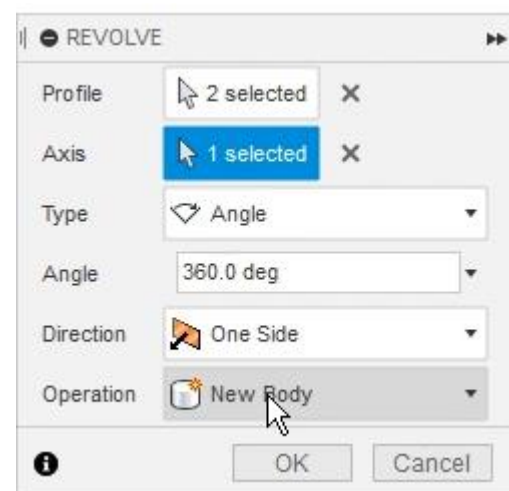
7. Reselect the construction geometry shown in the image on the right as the new Axis selection.



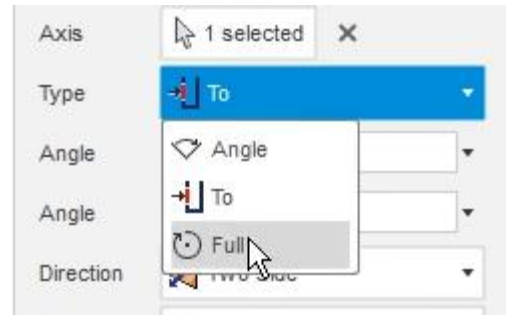
8. The revolve preview is shown as a translucent red body indicating that it is attempting to remove material from the solid body it intersects.



9. The Operation menu has similar options for the geometry you can create. Because the revolve intersects a solid body, the default selection is Cut. Explore the Join, Intersect, and New Body options to see what type of geometry would be created using these selections. Choose the New Body option.



10. Explore the options in the Type menu. If only a specific angle range is needed, the Angle option can be selected. If the solid geometry should only revolve up to a specific face, the To option can be selected. Choose the Full option from the menu, then click the dialog's OK.



11. The Browser can be organized by renaming its elements. Expand the Bodies folder and rename Body1 as **Extrude**, then rename Body2 As **Revolve**. Renaming these bodies can help you (or collaborators) find the correct body more efficiently. Save the file and continue to the next module.

