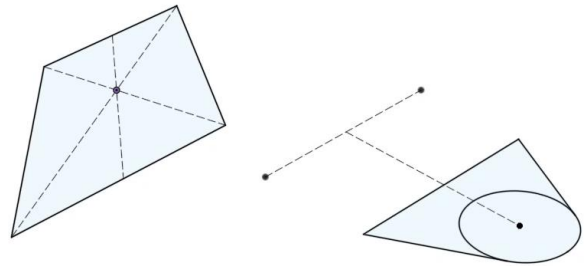


Lesson: Edit a Sketch

In this lesson, you'll edit sketches and modify their geometry by updating dimensions and constraints.

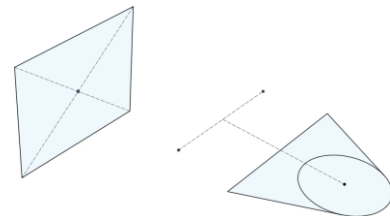
Learning Objectives

- Modify a sketch dimension.
- Use dimensions and constraints to define a sketch.



The completed exercise

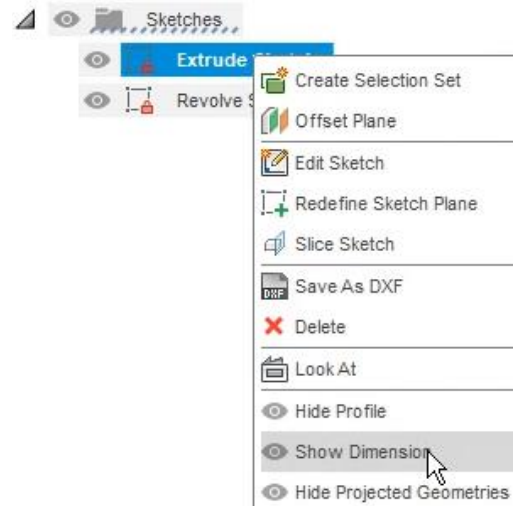
1. Continue with the *Basics of Fusion* file from the previous module.



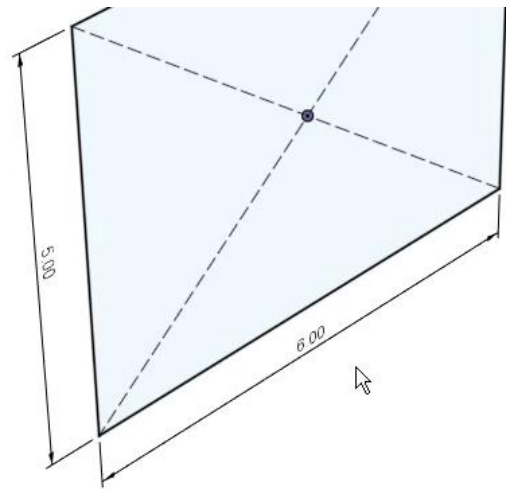
2. Expand the Browser's Sketches folder and select Sketch1. Click Sketch1 again and rename it **Extrude Sketch**. Rename Sketch2 as **Revolve Sketch**. The eyeball icon next to each sketch allows you to toggle the sketch's visibility.



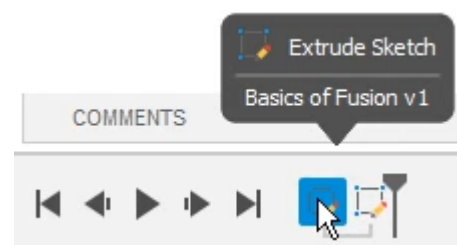
3. Right-click one of the sketches and choose the Show Dimensions option from the menu.



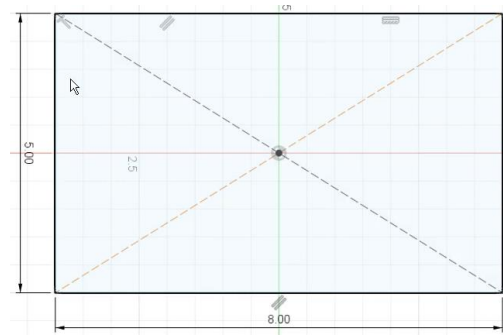
4. The sketch's dimensions can be edited without opening the sketch. Hide the sketch's dimensions by right-clicking the sketch in the Browser and selecting the Hide Dimension option from the menu.



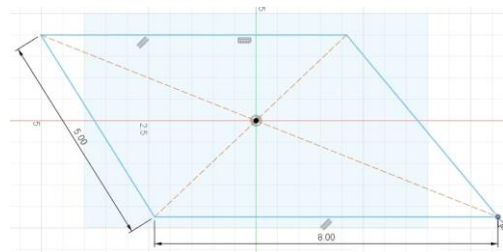
5. In the timeline at the bottom of the screen, double-click the first sketch feature. This will open the sketch and allow you to edit it.



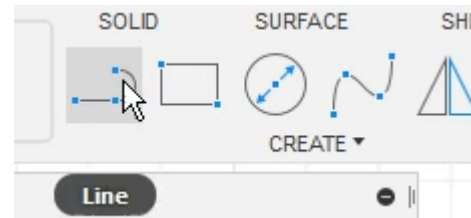
6. Increase the rectangle's length to 8 inches.



7. Delete the perpendicular constraint in the rectangle's upper left corner and notice that the rectangle's geometry can be tweaked to a new position. Also delete the parallel constraint on one of the rectangle's vertical edges.



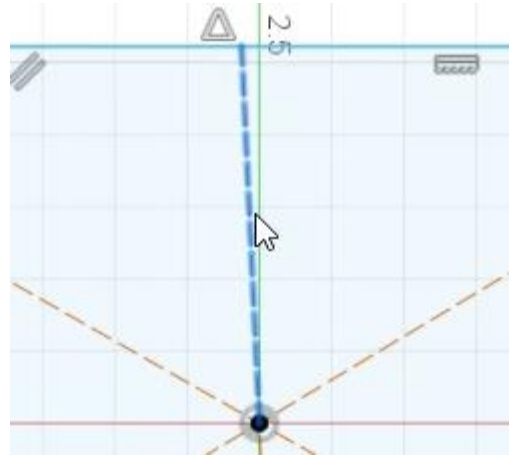
8. Click Create> Line or press L to use the keyboard shortcut to open the Line tool.



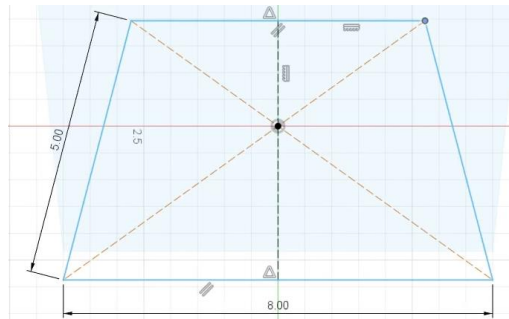
9. Activate the Sketch Palette dialog's Construction option. Draw a line connecting the rectangle's bottom edge to the sketch origin. Draw a second line connecting the sketch origin to the rectangle's top edge, then press Esc to end the Line tool. Deactivate the dialog's Construction option.



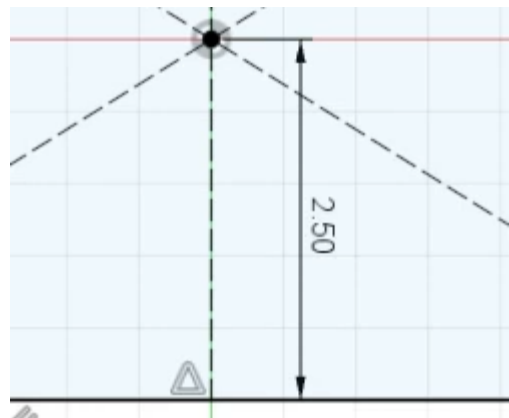
10. Select one of the new lines you just drew, then click Constraints> Horizontal/Vertical. A vertical constraint is added to the selected line and the rectangle's geometry adjusts. Press Esc to leave the Horizontal/Vertical constraint tool.



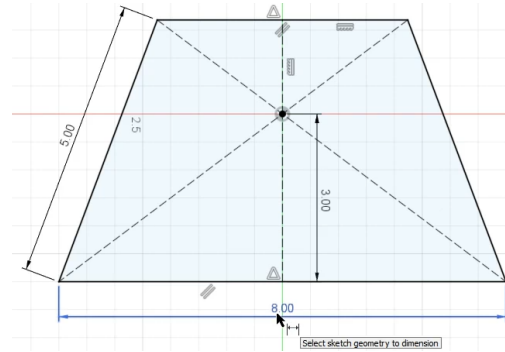
11. Drag the rectangle's geometry and notice the degrees of freedom it still has.



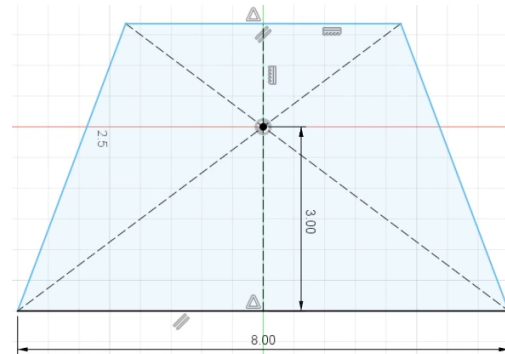
12. Click Create> Sketch Dimensions or use the keyboard shortcut by pressing D to open the Dimension tool. Select the sketch origin and the rectangle's lower edge and add a 2.5 inch dimension between these two selections. Because of the geometry's other constraints, the sketch is now fully defined.



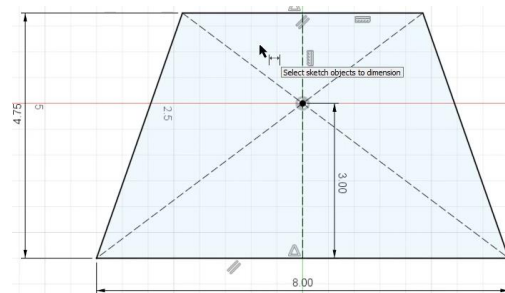
13. Increase the new dimension to **3** inches and notice how the geometry updates.



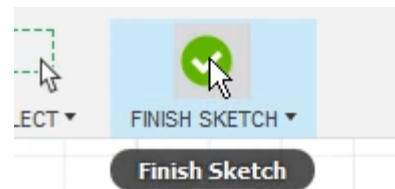
14. Select the 5 inch dimension on the geometry's side and notice that it is no longer fully defined.



15. Open the Dimension tool by pressing D and add a 4.75 inch dimension between the geometry's top edge and bottom edge. Because of the geometry's other dimensions and constraints, the geometry is once again fully defined.



16. Click Finish Sketch> Finish Sketch.



17. In the Browser, right-click the Revolve Sketch and choose the Show Dimension option from the menu. Increase the construction line's dimension to **6** inches and notice that the parametrically linked dimension automatically updates. Hide the sketch's dimensions by right-clicking it in the Browser and choosing the Hide Dimension option from the menu. Save the file and continue to the next module.

