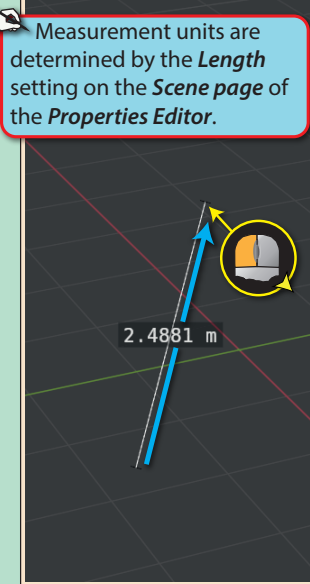
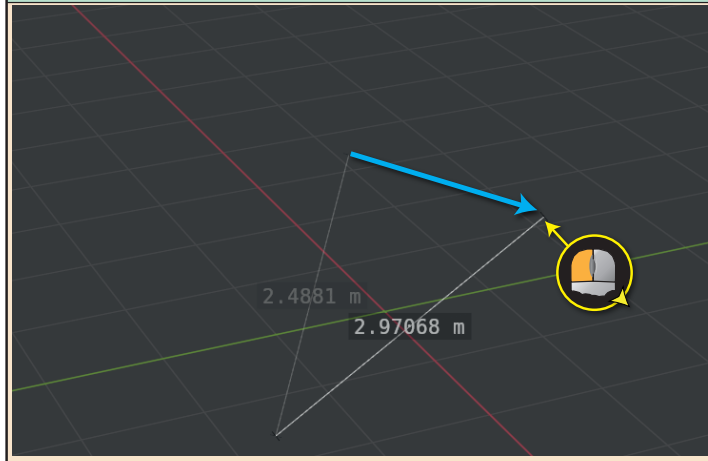


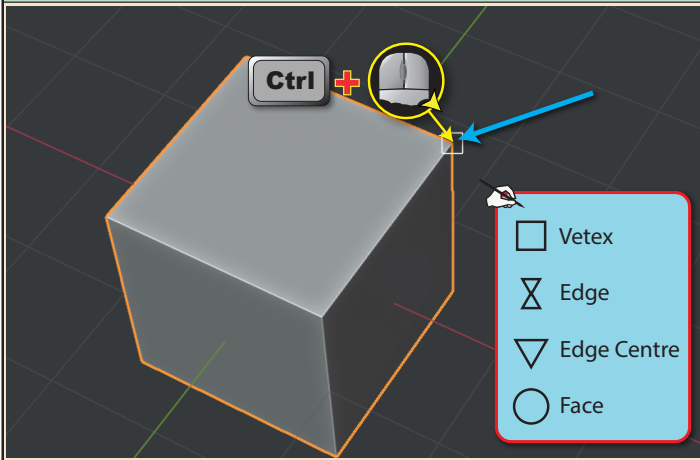
When our modelling involves the need for accurate distances and angles, the **Measure Tool** can be of use. Having selected the **Measure Tool** from the **Toolbar**, pressing down on the left mouse button starts the line, dragging lengthens it and releasing the button completes it. The line will display its length in the current units of measurement.



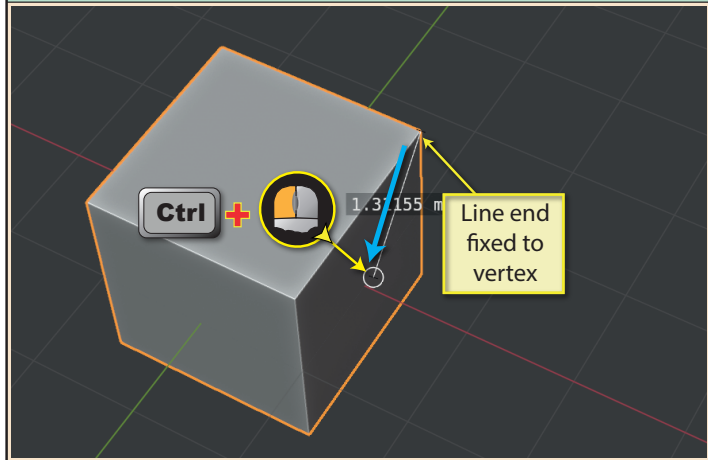
Dragging on the end of an existing measure line will move that end of the line.



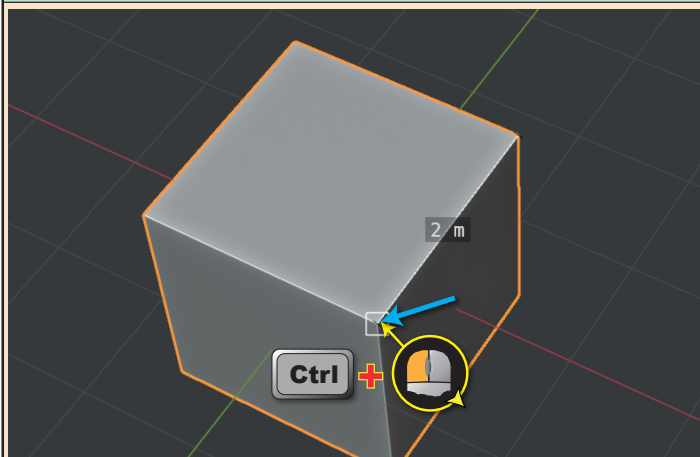
By holding down the **Ctrl** key we activate snapping which "attracts" the mouse pointer to vertices, edges, edge centres, or faces. These show up as various symbols when the mouse pointer comes close.



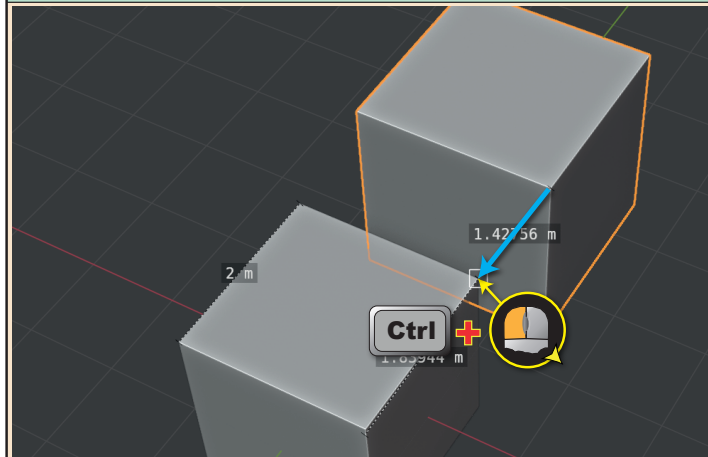
If we begin dragging while one of these symbols is visible, then the measure line will fix one end to that point.



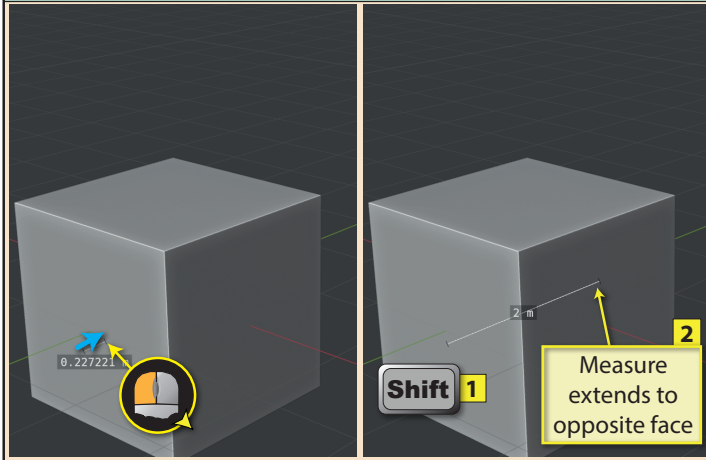
Continuing to hold down the **Ctrl** key, we can snap the other end of the line to another element and release the mouse button to complete the measure line. In this case, we've snapped to a second vertex.



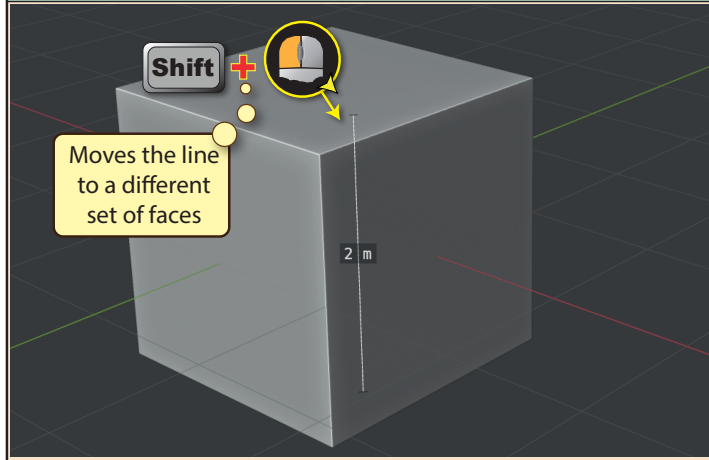
We can also use snapping to measure the distance between objects.



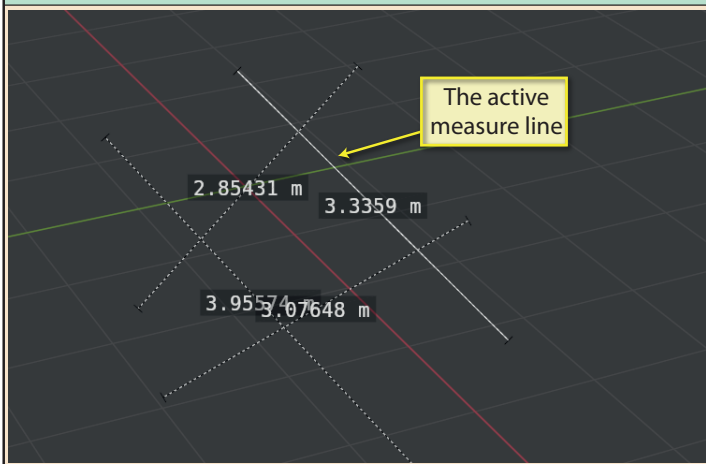
If we start to draw a measure line on a face, then press down the **Shift** key, Blender will automatically extend the line to the opposite face and hence give us a measure of the distance between the two faces.



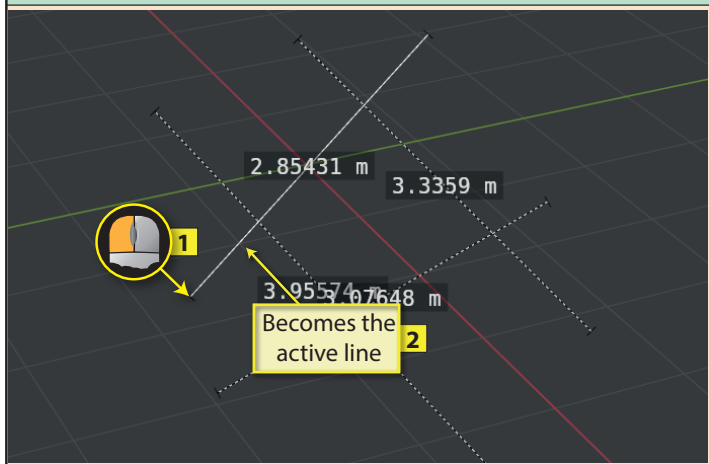
If we continue to hold down **Shift** and drag the line, it can be moved to a new position to measure in another direction.



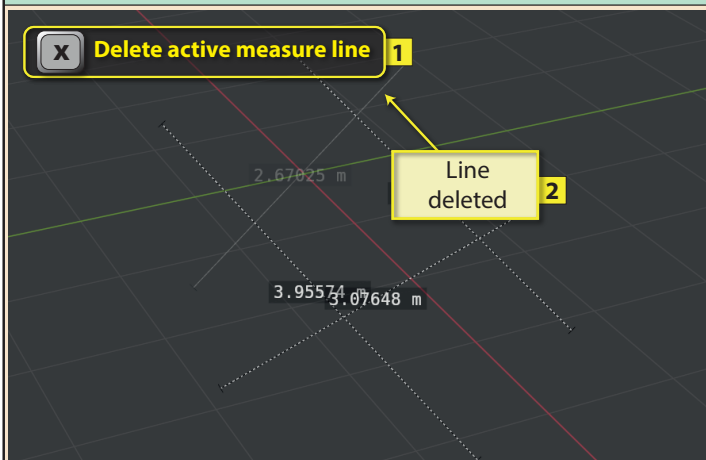
When several measure lines exist, the last one to be drawn is brighter and more solid than the others. This is the **active measure line**.



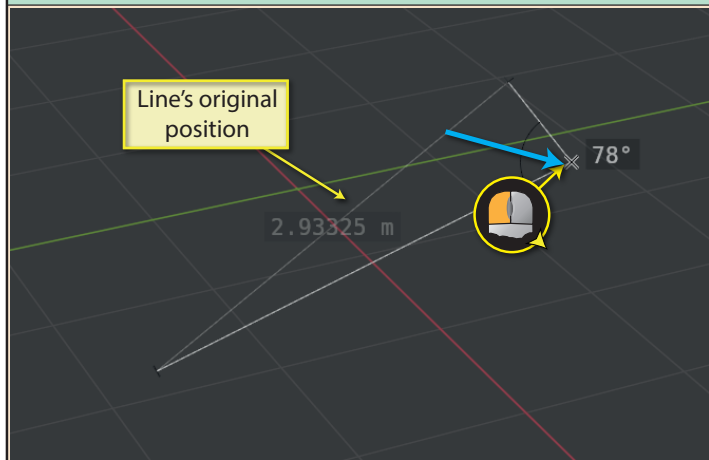
Clicking on the end of any existing line makes it the active measure line.



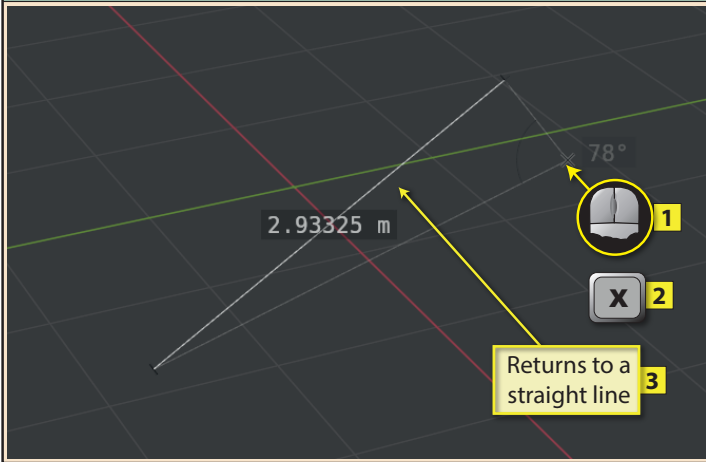
Pressing either the **X** or **Delete** key deletes the active measure line.



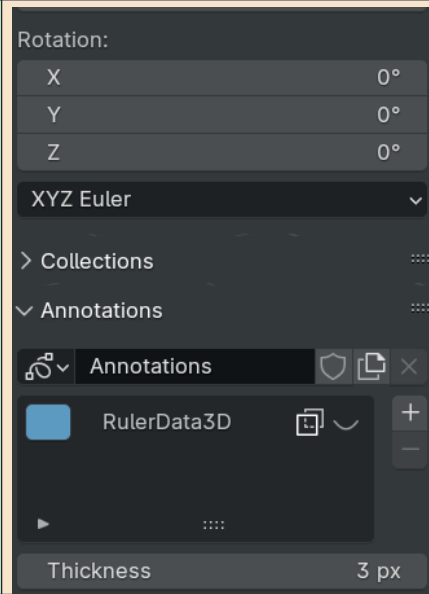
Drag on any point away from the ends, and a line will fold to create an angle. The angle's value will be displayed and changes dynamically as the mouse is dragged.



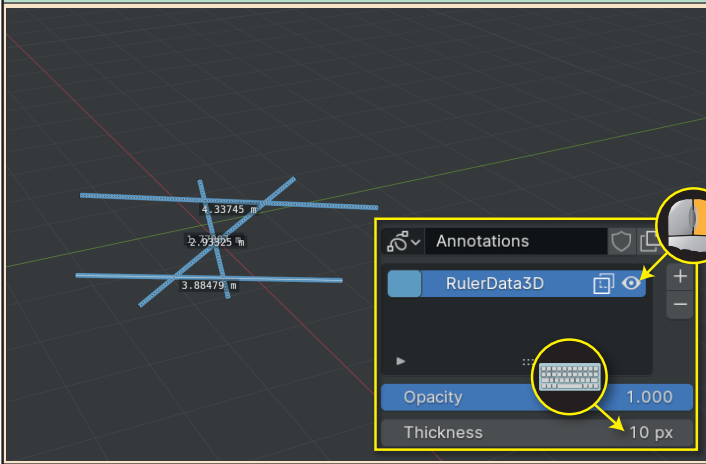
Pressing **X** or **Delete** when the mouse pointer is over the angle's apex, removes the angle, return the measure to a single straight line.



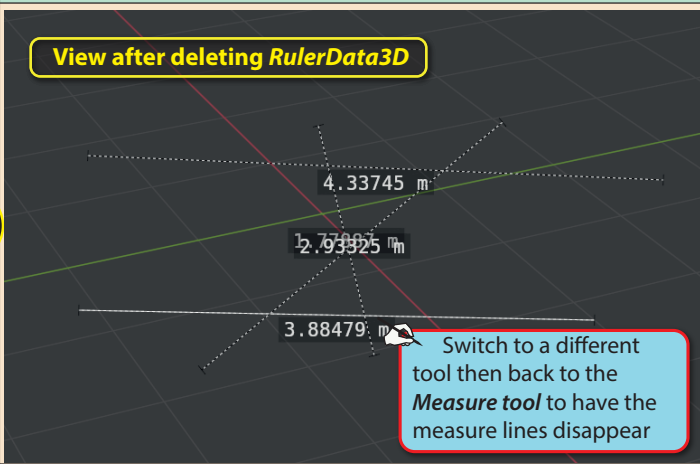
If we display the Sidebar (press **N**), go to the **View page** and expand the **Annotations** heading we'll see that Blender has added a layer (pen) called **RulerData3D**. This can be used as a background colour to all our measure lines, making them easier to see.



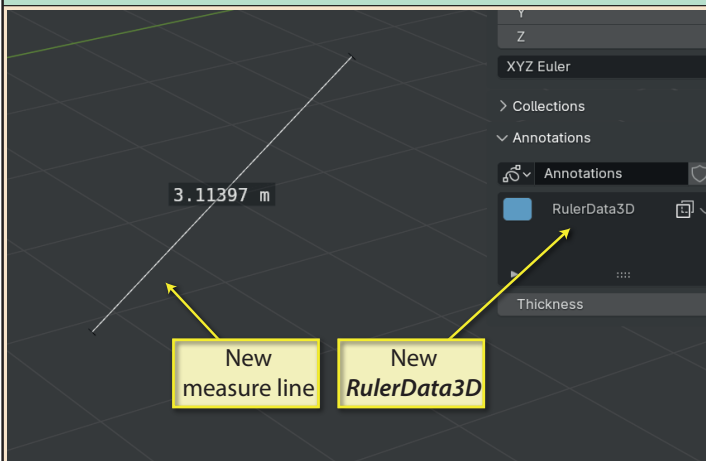
If we click on this layer, we'll see the usual parameters and if we set the **Thickness** to its maximum, 10 and make the layer visible, our measure lines will be much more visible.



Deleting the **RulerData3D** layer will remove the background of the measure lines but leave the lines themselves still visible. We have to switch to another tool and back to the **Measure tool** before the lines themselves disappear.



When we start to create new measure lines, Blender will again add a **RulerData3D** entry to the Layers table.



Measure lines aren't always where we might think they are when we draw freehand. Below we can see that a line that looks to be across the diagonal of a Cube (we didn't use snapping) but we can see its true position when we change viewpoint.

