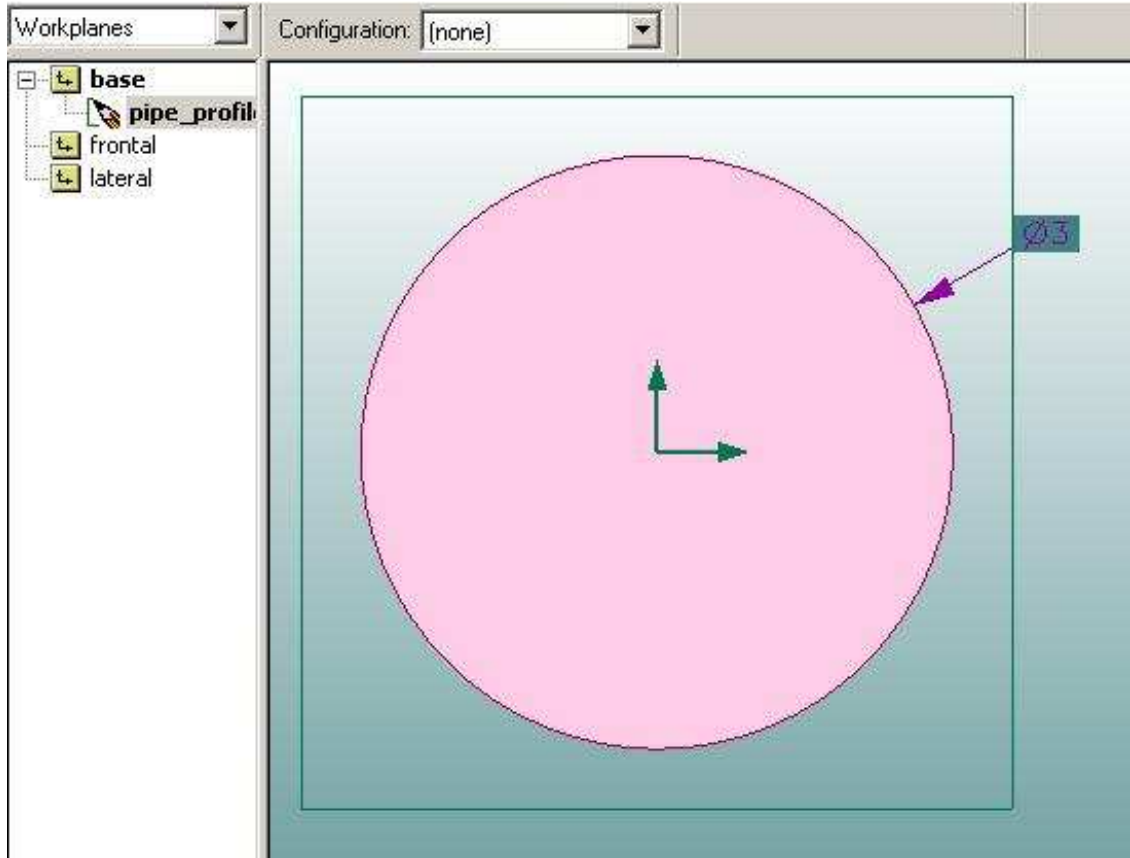


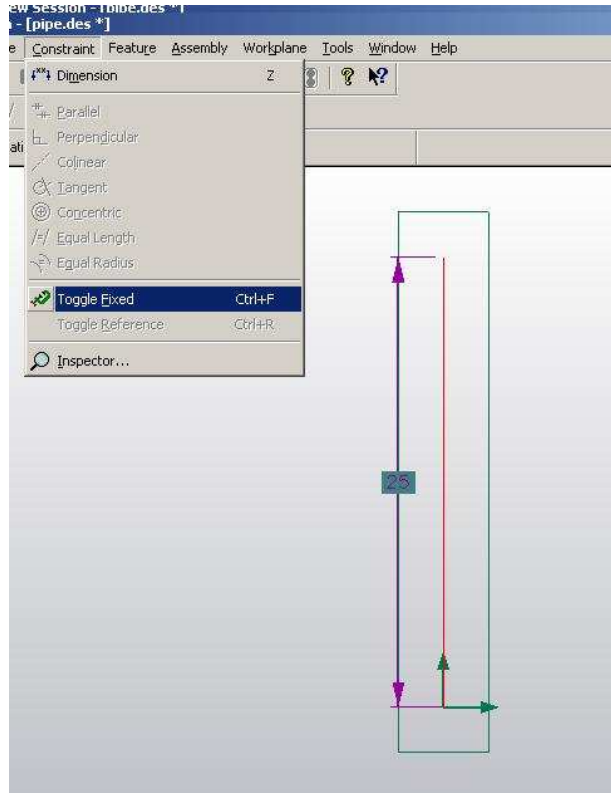
# Sweep along a Path

1. Set **Units** to **Centimeters**
2. Create a **New Design**. Save the new design as “**pipeINL811**” in your “**bottle**” folder.
3. Rename the “**Initial**” sketch on the **Base Workplane** to “**pipe\_profile**”.
4. **Shift-W** to view onto workplane. Drag out and dimension a **3 CM** circle.

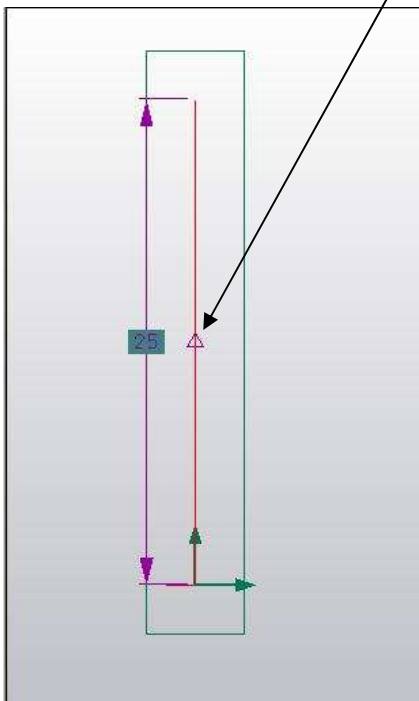


5. **Right Click** on the **Lateral** workplane, New Sketch. Name the sketch “**path**”. **BE SURE “path” is ACTIVE!!**

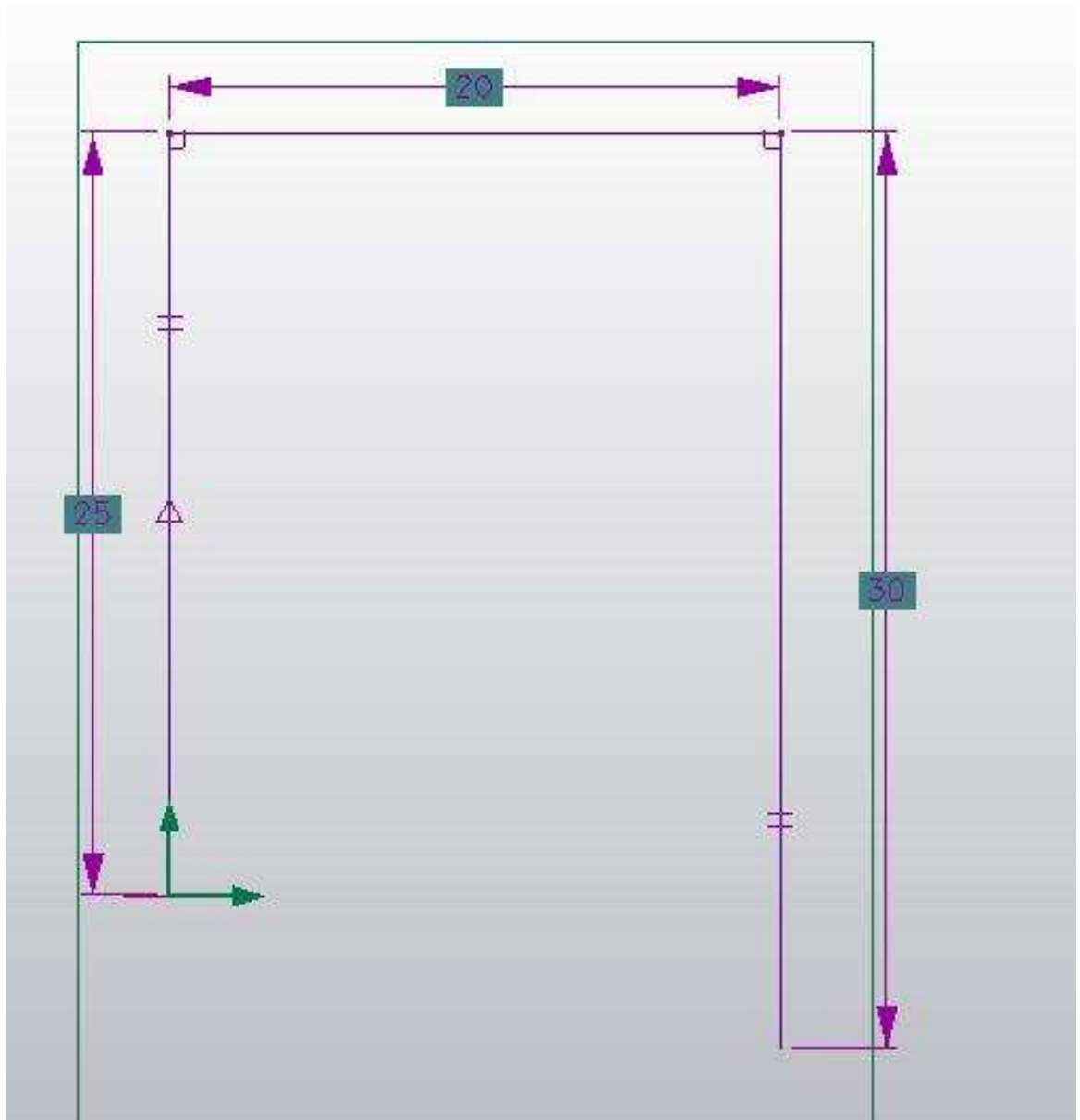
6. **Shift – W** to view onto workplane. Drag out and dimension a **25 CM vertical line**.
7. Select the left vertical line. Go to **Constraints >Toggle Fixed**. This keeps the left vertical line stationary.




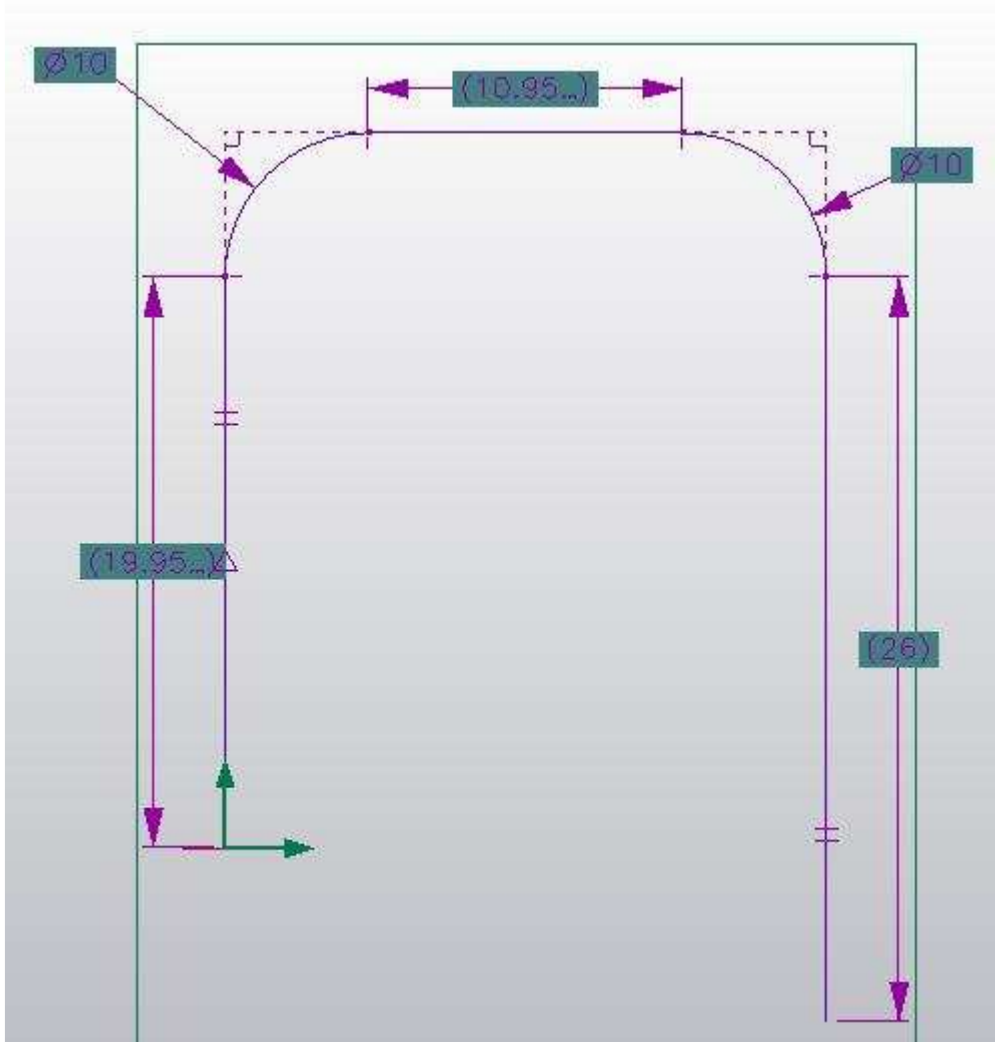
8. The line will now have a **triangle** overlaid on it, indicating that the line is fixed.



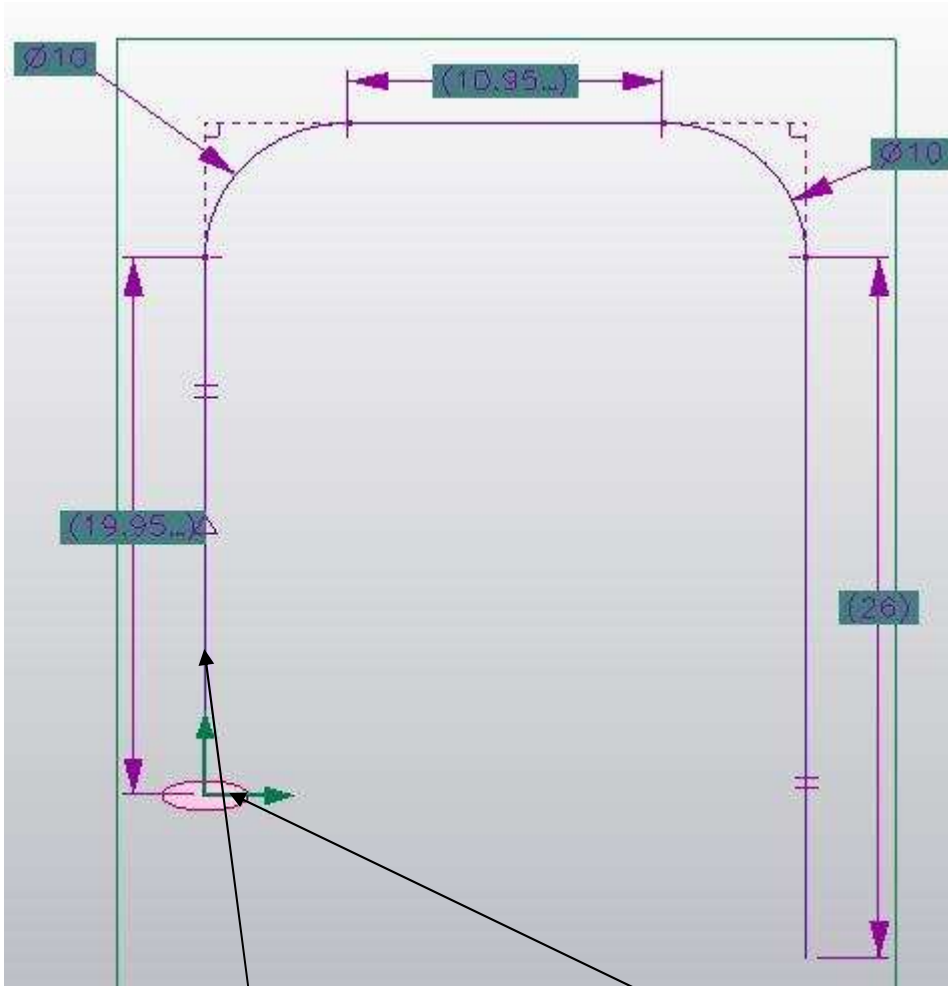
10. Drag out and dimension two more lines, as in the figure below.



11. Using the **Arc** tool , round the corners like the figure below. Dimension the arcs at **10 CM diameter**. Notice that the line dimensions are in parentheses. These dimensions are now “**weak**”, meaning that they are dependent on the diameters of the arcs. They are also inconsequential at this point – don’t worry about them.

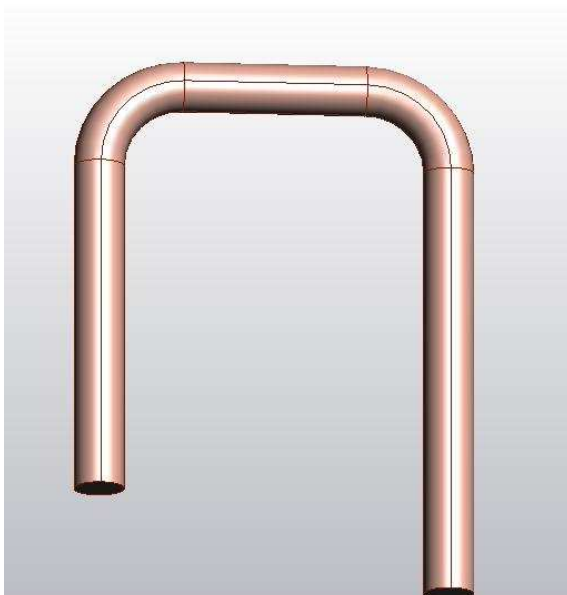


12. Using your **arrow keys**, tip the design as in the figure below:



Notice that the “**path**” starts in the middle of the “**pipe\_profile**”

11. Go to **Feature >Sweep Profile >Along Sketch Path**. Your “**pipe**” should look like the one below. Using logic, figure out how to fill out the **Sweep Profile** box. Are you going to Add or Subtract material? Which sketch must you use for the Profile? The Path?



13. Experiment with your “Sweep Profile” by *changing your sketches*.

- *What happens if you use concentric circles?*
- *What happens if you make your circles too large?*
- *What happens if you change the path?*

***REMEMBER THAT YOUR PATH MUST BE A SERIES OF CONNECTED LINES!!***