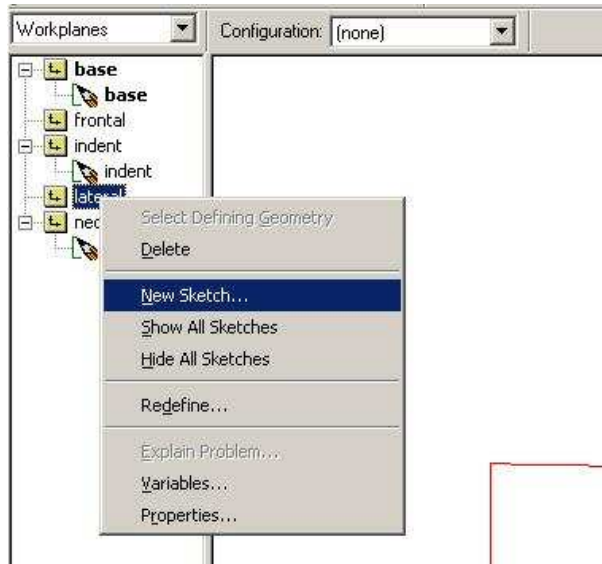
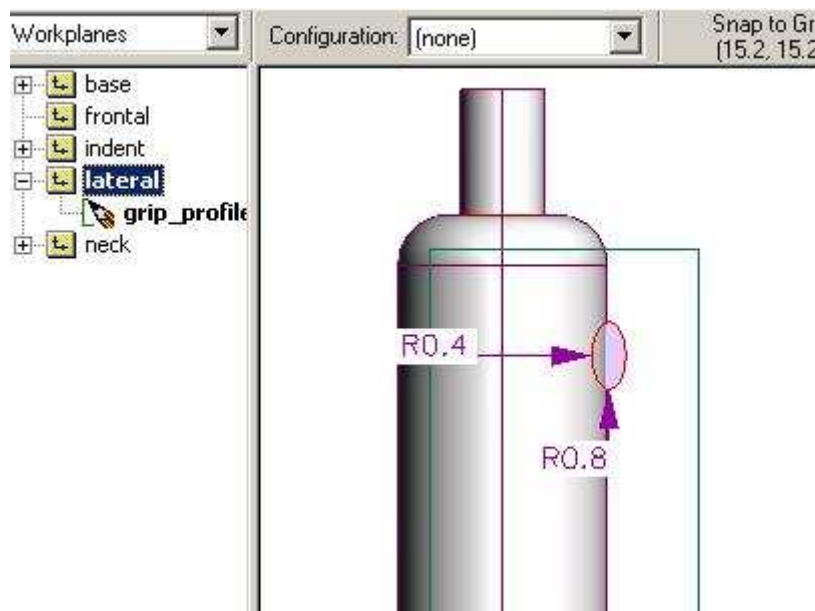


Grips

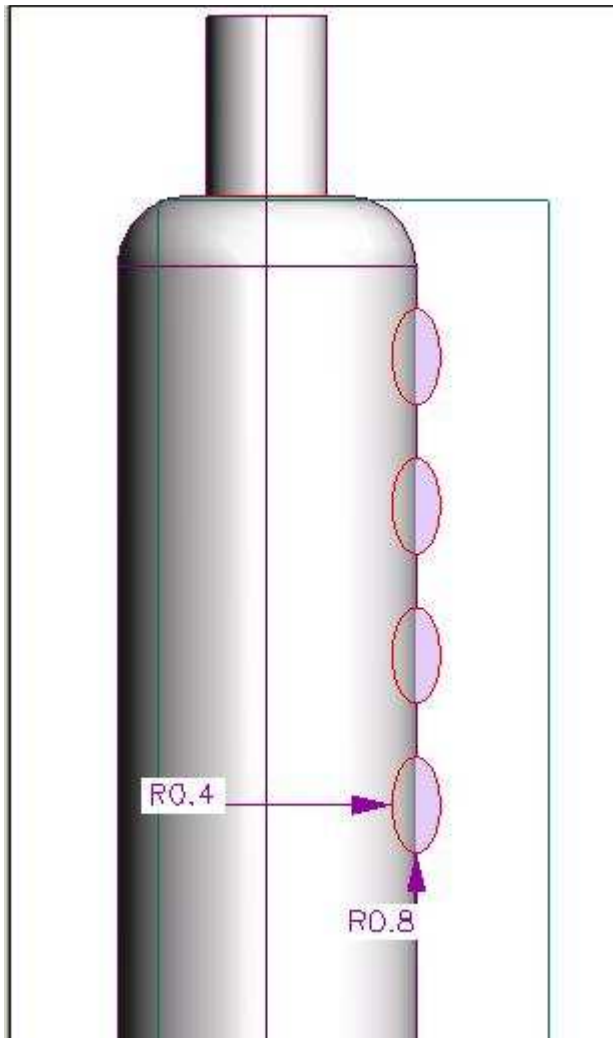
1. Set **Units** to **Centimeters**
2. Open “**gripINL811**” from **Share > Hanson Middle > World of Tech > ProDesktop > Grip**
3. **File > Save Copy As**. Navigate to your **Bottle** folder in **World of Tech** folder. Save as “**gripINL811**”, replacing **INL** with *your initials*, and **811** with *your class number*.
4. Close “**gripINL811**”.
5. Open your copy of “**gripINL811**” from your **Bottle** folder.
6. **Right click** on the **Lateral** workplane, **New Sketch**. Name the new sketch “**grip_profile**”.



7. **Shift-W** to view onto workplane. **Sketch** and **Dimension** an ellipse, as below. Notice there are **TWO RADII** in an ellipse.

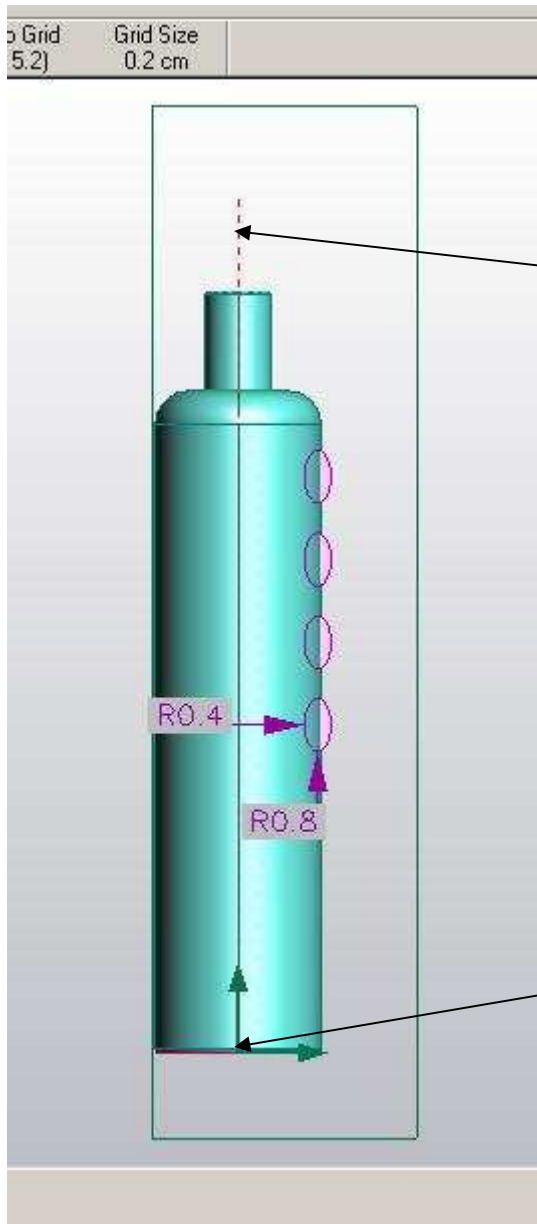


8. **Duplicate** the ellipse by going to **Edit > Duplicate**. Figure out how to set up this duplication scheme. Hint: Experiment with the Duplicate Box.



9. **Right Click** on the **Lateral** workplane and create another **New Sketch**. Name the new sketch **“axis”**.

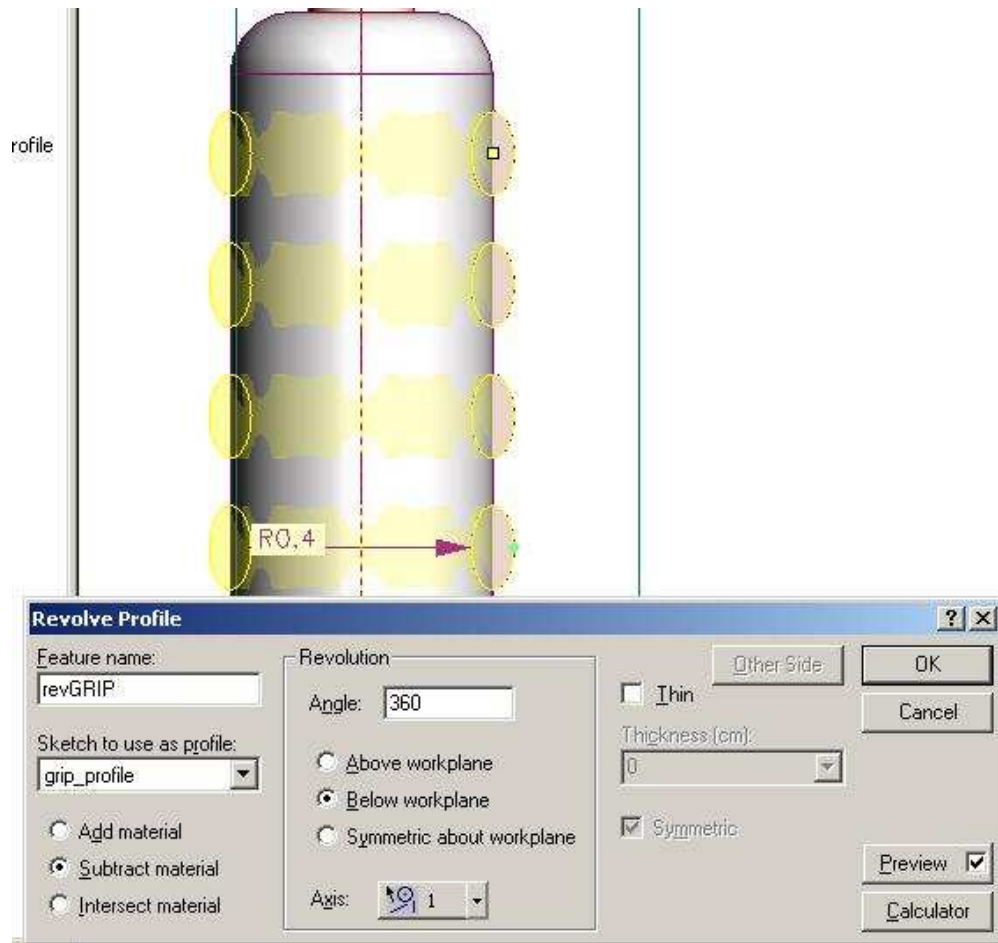
10. Draw a *vertical straight line* from the **0,0** point through the **top of the bottle**.
Right Click on the line and **Toggle Construction**.



Axis line. Be sure to
"Toggle Construction",
which will make the
line dotted.

Start axis line here.

11. Revolve the “grip_profile” around the “axis” line as shown below.



12. Your bottle should look like the one below:



13. Experiment with **Rounds**. Be sure to **Shell** the bottle after the grips are completed.

14. Try using the “**Sweep along Helix**” feature. With some movement of the ellipses, you can create a bottle like this:

