

## ME 110 (Spring 2011)

Assignment #5 (Due Friday 2-28-11):

1. Create the following mug and submit the SolidWorks drawing file (dimensions in inches)
  - Step 1: Open a sketch on the front plane and draw the three lines on the bottom, top, and left
  - Step 2: Starting at the bottom right, draw a 3-point arc followed by a tangent arc
  - Step 3: Create a second 3-point arc between the tangent arc and top line

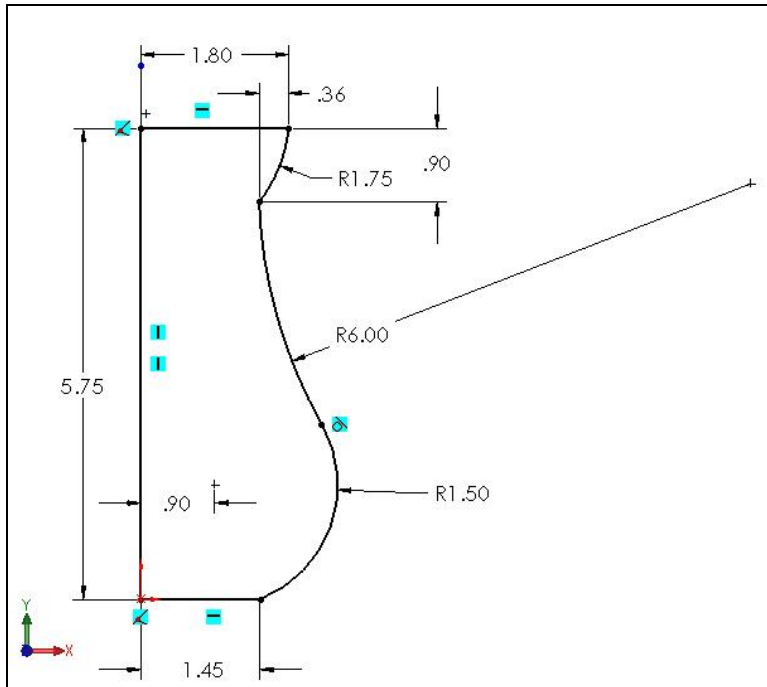


Figure 1. Picture of 1<sup>st</sup> sketch of profile (Steps 1 through 5)

- Step 4: Dimension as shown in Figure 1
- Step 5: Add a centerline and revolve the sketch all the way around
- Step 6: Shell out the top surface to 0.25"
- Step 7: Open a sketch on the front plane and draw the handle
- Step 8: Draw a horizontal line coincident with inner hidden line of mug
- Step 9: Draw three consecutive tangent arcs
- Step 10: Draw the top horizontal line coincident with inner hidden line of mug
- Step 11: Dimension as shown in Figure 2

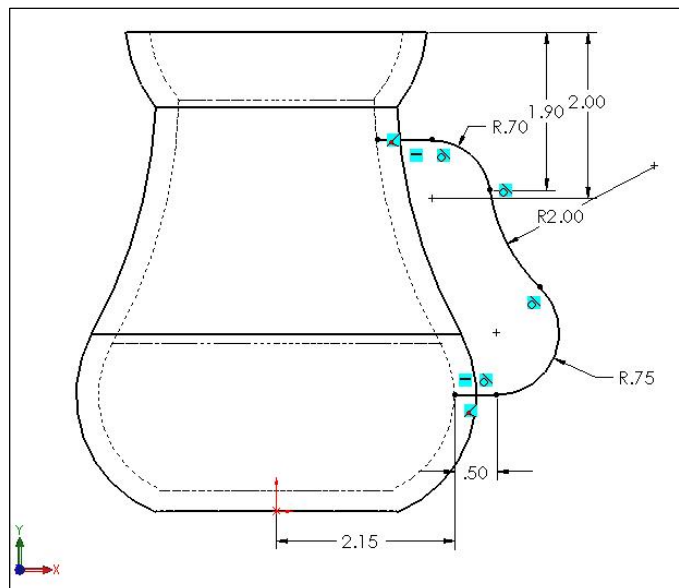


Figure 2. Picture of handle path steps (Steps 7 through 11)

- Step 12: Insert a reference plane offset 2.15" from the right plane and open a sketch on this plane
- Step 13: Draw an ellipse, dimension width and height as shown
- Step 14: Force the 1" wide points to be horizontal and the center point to be coincident with path point on line
- Step 15: Sweep the ellipse along the handle

- Submit drawing file printouts in hardcopy format in class.
- DO NOT DIMENSION THE MULTIVIEW DRAWINGS. THERE ARE TOO MANY TO MAKE IT LOOK NEAT
- Homework submission should look like that seen below in Figure 4.

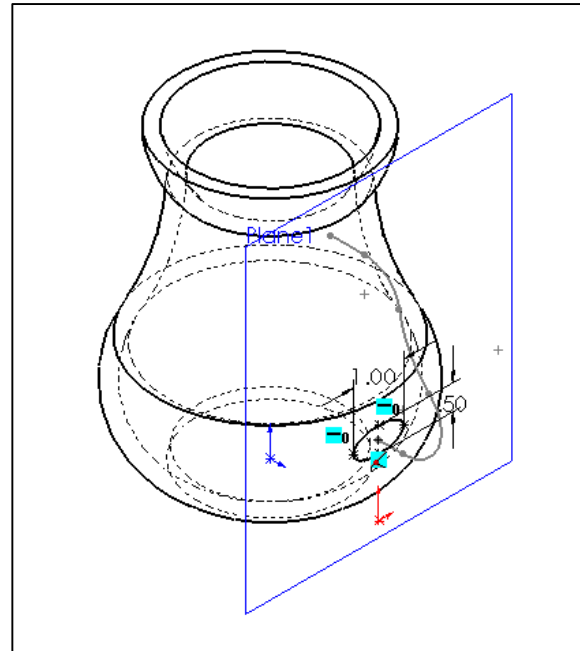


Figure 3. Picture of ellipse profile (Steps 12 – 15)

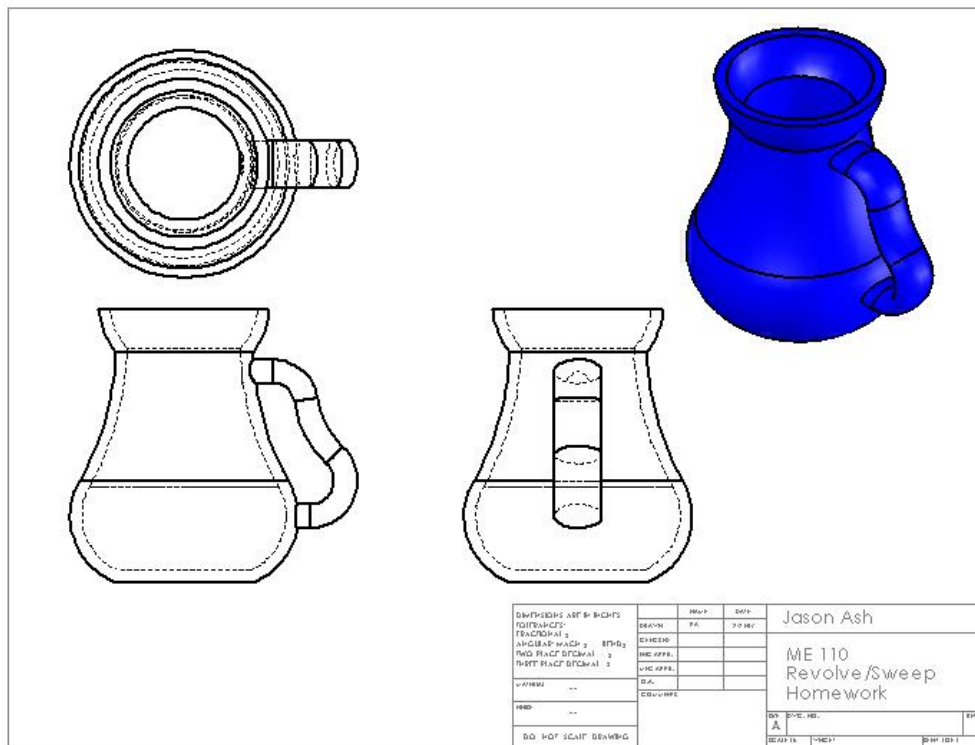


Figure 4. Final drawing to be submitted of revolve/sweep homework (no dimensions needed)

2. Create the following shelf stand piece and submit the SolidWorks drawing file (dimensions in mm)
  - Step 1: Create planes from the top view as shown in Figure 5
  - Step 2: Create circles on each plane as shown in Figure 5
  - Step 3: Loft between all the circles created
  - Submit drawing file printouts in hardcopy format in class.
  - Homework submission should look like that seen below in Figure 5.

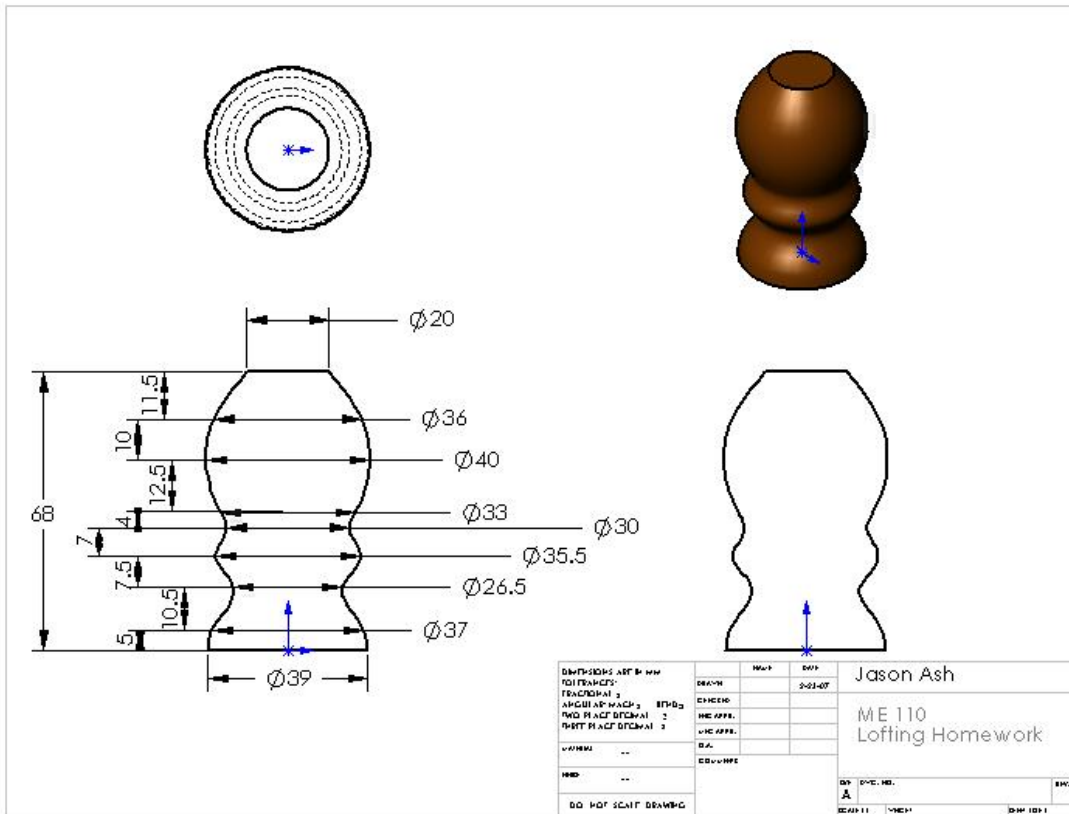


Figure 5. Final drawing to be submitted of lofting homework (dimensioning required).  
**Note: Select the front view before adding dimensions, so that it forces those on the front view.**