**SolidWorks Worksheet**

Create the following Parts in SolidWorks. You will need to submit document as a PDF on GradeScope. You will also need to submit problem 4’s part onto GradeScope, with both a 3D PDF and a .SLDPRT compressed into a .ZIP folder.

1. **(4 points)** Follow Lesson 1: Parts – a built-in tutorial in SolidWorks (Help 🡪SolidWorks Tutorials 🡪 Getting Started 🡪 Lesson 1: Parts)

Add a screen shot of your fully defined circle sketch (#3 under “Constraining Boss”)

(Your screen shot should be taken while in **sketch mode** and your sketch should be **black** since it is **fully defined** by either dimensions, relations, or both.)

Add a screen shot of your final part from Lesson 1

(no need to perform last step in Lesson 1 - add “Realistic Appearance”, since it relies on a strong computer graphics card)

1. **(4 points)** Create a smiley face plate: Use at least **one extrude**, and **one extrude-cut**. **Fully define** all sketches using relations and/or smart dimensions.

Add a screen shot of your **sketch** (in sketch mode) showing that it is **fully defined**. This single sketch should include at least **two eyes** and on **mouth**.

(Your screen shot should be taken while in **sketch mode** and your sketch should be **black** since it is **fully defined** by either dimensions, relations, or both.)

Add a screen shot of your final smiley face **part.** Include **the “design tree”** in your screen shot showing each **of your necessary features** (in this case, at least, **one extrude** and one **extrude cut**).

1. **(4 points)** Create a vase / pen holder using at least **one spline**, and **one revolve**. You may add onto this beyond the revolve if desired. **You do not need to fully define** your sketch since splines can be complicated to fully define)

Add a screen shot showing the **spline sketch** which you will use for your revolve feature.

(Your screen shot should be taken while in **sketch mode**)

Add a screen shot of your final cup / vase **part.** Include the **“design tree”** in your screen shot showing each of **your necessary features.** (in this case, at least, one revolve feature)

1. **(7 points)** Take one of your components from the parts given to you for lab 0 and lab 1. Use a caliper and/or ruler to measure your part. Draw a **hand-sketched model** and label major dimensions (**work in millimeters!**) of the part. Finally, create a **SolidWorks Model/Part**. **Finally save your .SLDPRT file as well as a 3D PDF file into one .ZIP folder.** (Effort will be considered as part of your grade for this section, so do your best to replicate (ie, if you chose to develop a model for a breadboard, a simple rectangular box made of one extrusion would not give much credit).

Add a screen shot of your final **part.** Include the **“design tree”** in your screen shot showing **your features**.

Take a picture or scan of the **hand-sketched** model of your part. Clearly make visible your **labeled dimensions.**

Comments: **(1 points)** Write here in a couple of sentences describing what was most challenging for you in terms of modeling this part in SolidWorks: