



MAE 214 – Fall 2024

Homework #3

Due: Saturday, November 9th, 2024 by 11:59 p.m. via Canvas

Total Problems: 3

General instructions:

Name your files using the following name convention (Remember part and drawing files have different file extensions).

HW3_Problem_#_LastName.SLDPRT (Part File)

HW3_Problem_#_LastName.SLDDRW (Drawing File)

All files should be compiled and submitted in a single zip file. Please make sure your file has the .zip handle.

All sketches must be fully defined for all parts. **Don't worry if your drawing sheets say underdefined.**

Problem 1 (30 points). -

- a) Make a SolidWorks part model from the given figure below. All dimensions are in millimeters.
- b) Also, create a drawing sheet and dimension it as shown. Your dimensions should follow basic dimensioning conventions laid out in Module 4.

Submit your part file and drawing sheet. The part file and drawing sheet MUST have the same name.

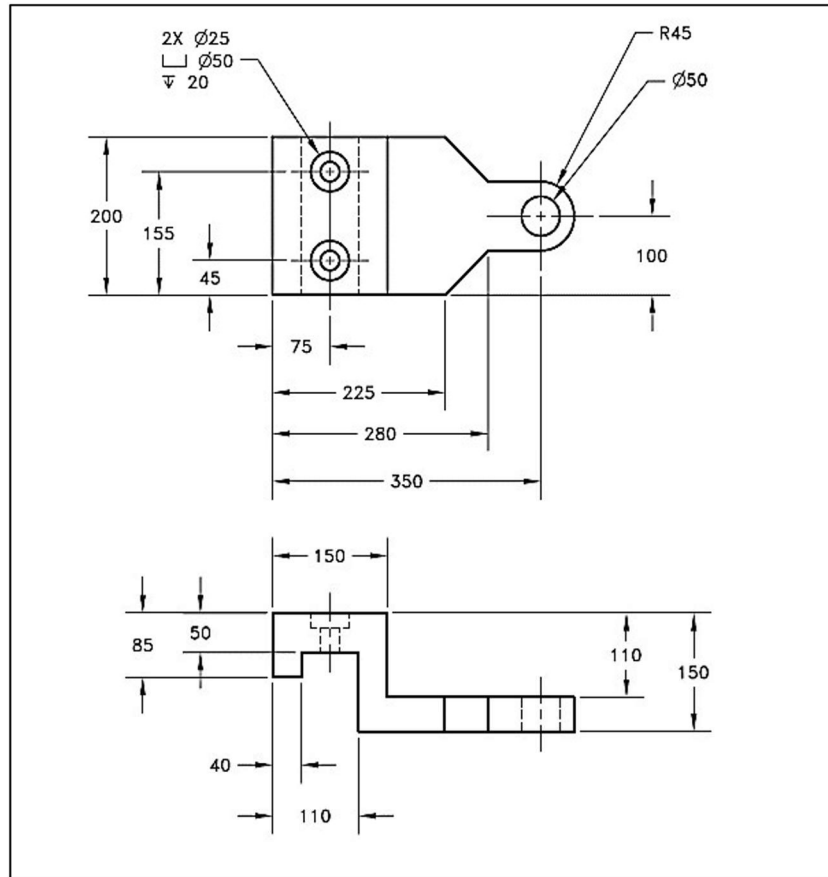


Figure 1

Problem 2 (20 points). -

- a) Make a part file in SolidWorks from the following figure. You can use any random dimensions, but you should make sure that the proportions of the part are roughly similar to the provided figure.

Hint: Use the grid as a reference

- b) Create a drawing sheet of your part and get a front sectional view in the drawing sheet for a given cutting plane line as indicated. Do not try to dimension the drawing sheet.

Submit your files (part and drawing sheet). The part file and drawing sheet MUST have the same name.

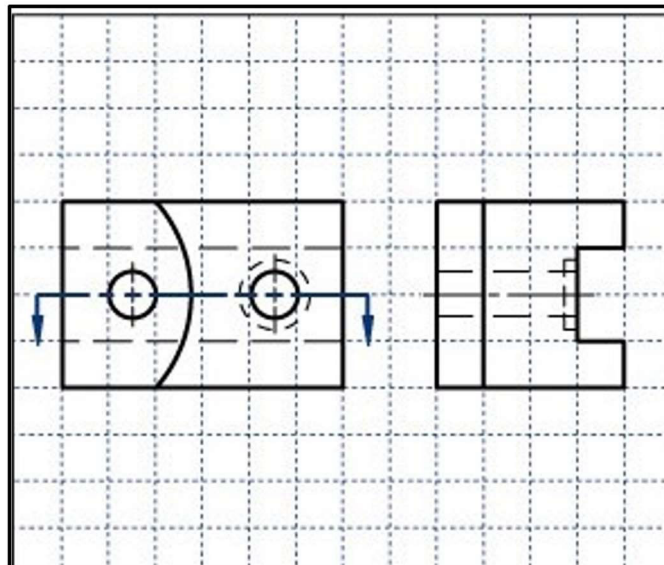


Figure 2

Problem 3 (50 points). -

Make a SolidWorks part of the “Piston” (drawing attached). All dimensions are in inches.
You must use a “revolve” command to make the body of the piston. Submit your part file.

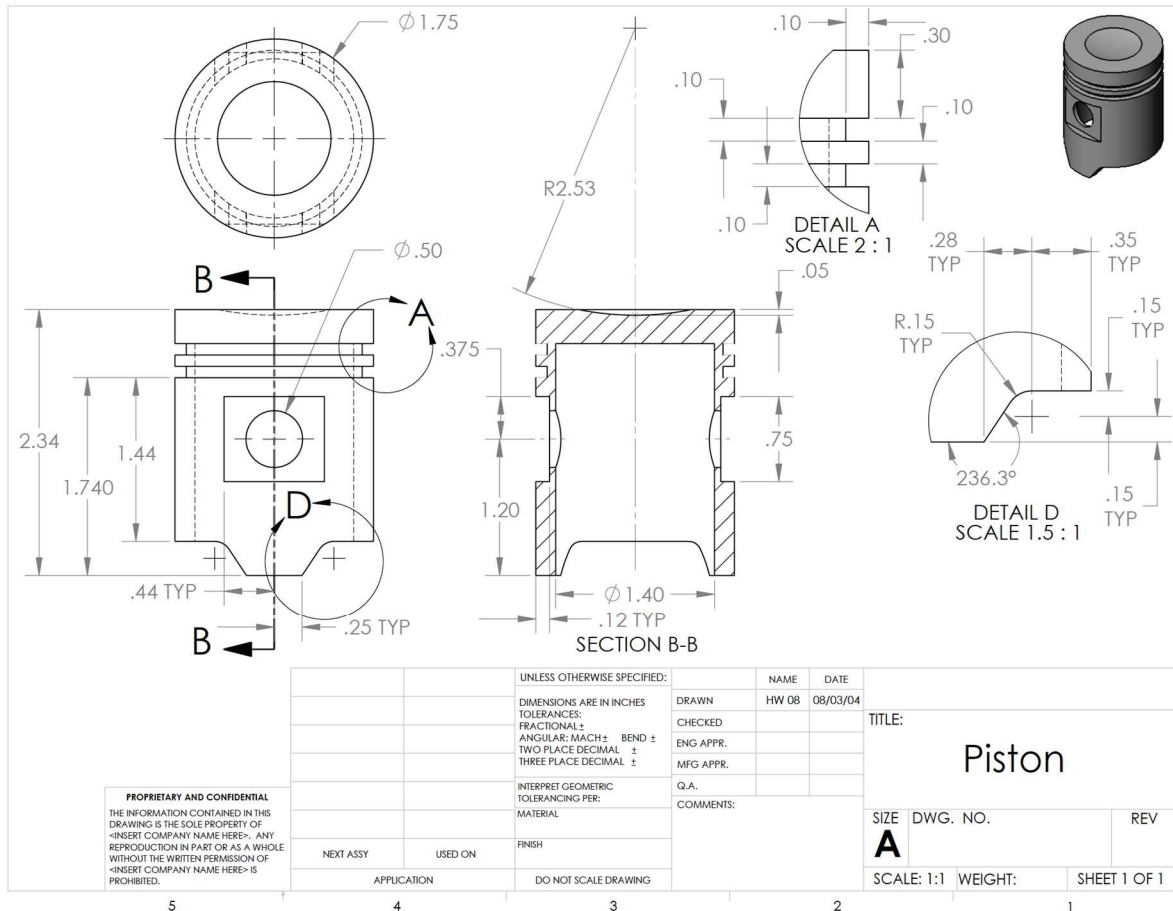


Figure 3

Grading Rubric

Grading Rubric			0%
MAE 214 - HW3			
Name:			
Item	Points Available	Points Awarded	Comments
Problem 1 - Part Model & Engineering Drawing (30 points)			
Part has correct features and dimensions (fully defined sketches)			
Engineering Drawing has Complete Orthographic views and dimensions			
Problem 2 - Part Model & Section View (20 points)			
Part has correct features			
Engineering Drawing has appropriate Section view			
Problem 3 - Piston Model (50 points)			
Main Body of Part was created using a Revolved Feature			
Part has correct features			
Part has correct dimensions			
Total	100	0	