**MAE224 Fluids Lab #1 Hydrostatics *(30 points)***

**Names:**

**Lab Day:**

**Instructions:** Complete this worksheet as you work through the lab. Once completed, submit it through Gradescope before the start of your next lab. Each group should submit a worksheet.

**Exercise 1:** Calibration Curve

**A)** How did you measure height? What is the uncertainty in height measurement? *(4 pts)*

**B)** Look at how pressure changes in time (live) as you pressurize the system. Explain this behavior (can you figure out a way to reduce unwanted behavior?). *(4 pts)*

**C)** Tabulate your data below and plot pressure versus the difference in heights between the water columns. Be sure your table/plot includes labels, caption, units, legend, appropriate number of significant figures, etc. *(8 pts)*

Insert Table here

Insert Chart here

**D)** What kind of curve-fit makes the most sense for the plot in part (C) and why *(4 pts)*

**Exercise 2:** Other Questions

**A)** Estimate the uncertainty in your data. What is the biggest source of error? *(5 pts)*

**B)** Does the calibration curve you found for the sensor match that in the manual? Why might it be different? *(3 pts)*

**C)** What is the shape of the calibration curve (can you show that this truly is the shape)? *(2 pts)*