Test 1 Reflection

During this test I computed the pressure and the forces (magnitude, location, and direction) associated with it in a stagnant fluid and I also determined object stability while floating or submerged in a fluid. Problem one and two both involved computing the pressure of a stagnant fluid. Problem two also involved finding the location, direction, and magnitude of the force. Problem three involved determining the stability of a floating object.

My solution for problem one was a perfect 6/6. I was able to use the proper equation, set up the problem, and use the correct units. I got the correct final results and I was able to set up the second part correctly. For problem two I was able to set up the equations correctly, get the correct final results, and set up the excel spreadsheet correctly. The only thing I may have done wrong was not set up the graph for multiple heights of fluid one. This was not asked by the question on the test so I believe I should receive a 7/7 on this problem. For the final problem I set up the equations and the excel spreadsheet correctly, but I did not make an extensive list of results. I also did not use a specific weight of a real substance and for those reasons I think I should get a 6/7 on this problem. Overall I think my grade should be 85.7.

If I were to take this test again I would include more plots on my graphs. I would also provide a third plot for question three with a new diameter and use the specific weight of wood to get a more real world accurate problem. I was not clear enough with my excel spreadsheet for the problem.

One major issue I had with this test was a lack of experience using excel to make a system of equations. Thankfully Professor Ayala was able to show me how to make equations. Considering it was my first time I think I did well for both problems. The concepts of fluid pressure and buoyancy are fundamental for this class and are important for engineers to know. There are many applications for needing to know fluid pressure at different depths. Buoyancy and stability are slightly more situational but they can also be very important when it comes to designing something that will be in or around water. I am not sure where my career is going to go but I could see myself dealing with these concepts. I spent around five hours on the test but most of that was trying to work on the excel spreadsheets. I am a perfectionist and I worry about failing tests so I often spend too much time on tests.

Overall I would not change how I went about the test because I feel much more prepared for using excel in the next test and in the future.