MET 330 Test Reflection 3

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1) This test is an attempt to demonstrate an understanding of the concepts of forces in pipes, such as fluid flow quantities (such as, pressure, fluid velocity, flow velocity, etc.)

2) As far as the structure of the test, my handwritten work was relatively on par with the given solutions. My work with excel began correctly as far as laying out some of the givens in the problem, but I could not configure an excel sheet that I felt was correct.

3) Going off the rubric, the work that I did correctly came out to a 6/10.

4) a) During the test, I found the most difficult part of the test to be the excel section. I attempted to follow along the class example, but I could not figure it out in time.

   b) The steps I took to complete this text was to use the information I had most fresh in my head by solving the preliminary parts of the test, such as finding the equations needed to complete the problems as shown in class. Then, I attempted the excel portions.

   c) Through the days of the test, I spent a large majority of my time doing the problems on paper and chose to complete the excel portion after. The excel portion of the test proved to be the most difficult for me, as I could not understand how to complete the calculations in excel.

   d) I believe that engineers use these concepts in applications like working in/designing factories. For example, selecting a pipe that would best fit a specific flow rate or velocity would be directly within the requirements of the job.

   e) I believe that in my chosen field of engineering, I will use these concepts in fluid related problems such as oil and fuel delivery.

   f) Everything I learn in this class, including the ability to take responsibility for our work, as well as the ability to coordinate projects with others are important things for any engineer to be able to do.

   g) I believe that I will be using these concepts in my preferred application of engineering, which is automotive. Most vehicles have fluid systems that involve different size fittings and methods of delivering the desired fluid at certain velocities.

   h) I have yet to use concepts from this class in previous studies.

i) I feel as if I've improved greatly since the last test as my handwritten work has been greatly increased. My understanding of the concept on paper has increased, but my understanding of excel needs work.

j) I feel that this topic will help me design my own delivery systems, allowing me to determine the chances of forces in piping and fixtures to satisfy the fluid requirements of a system.

k) I spent around 12 hours on this test in total, most of which was spent on the paper portion of the exam.

1. PROBLEM 1 or 2)
    1. Reasonable assumptions (reductions, valve, tubing diam, lengths) 1/10
    2. Apply Bernoulli twice or get 2 equations from Bernoulli 1/10
    3. Consider ALL minor losses? Handled them correctly? 2/10
    4. Correctly handled the pipe losses? 1/10
    5. Obtained 3 equations with 3 unknowns? 1/10
    6. Solved system of equations correctly (Excel?)? 0/10
    7. Results 0/10

    TOTAL **6/10**