MET 330

Test 3 Reflection

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a) How and why the test demonstrates your work toward one, or more, of the course learning objectives. Be specific on the course objectives you decide to mention.

This question showed me how to find various variables of the pipe system. From using Bernoulli's to find the pressure in different points of the system to using excel to iterate values in order to find the solutions.

1) How your test compares against the available solution. State the mistakes you made and what you will do next time to avoid making same mistakes. Please point out exactly where you made the mistake, say why you made the mistake, and how you should have done it. If you were taking this test again, what advice would you give yourself to ensure that you had a successful test?

My calculations seem to be correct as I preformed Bernoulli's equation and found the head losses. As well as finding the equations for term Vb and Va. This allowed me to find the equations needed to solve for Qa and Qb.
As for the excel I iterated Qa correctly and was able to find the percent difference for fa and fc but I did not iterate f in order to decrease the percent difference.

2) What your grade should be. Base it on the writing rubric provided in the test and the correctness of your solution. What are the strengths and weaknesses of your test?

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.	Handled correctly the pipe losses?	1/10
5.	Obtained 3 equations with 3 unknowns?	1/10
6.	Solved system of equations correctly (Excel?)?	1.5/10
7.	Final results	1.75/10
	TOTAL	**9.25/10**

FINAL GRADE:

(90)*(9.25/10) = 83.25

4) Discuss the following:

a. What issues did you encounter in completing the test? How did you troubleshoot them?
For many of these problems I used given equations in the lecture and books, I knew I might need to create my own versions to find the values I was looking for. I felt as though I did a decent job at this however, these test answers show me just how much I failed at finding the correct values.

b. What steps did you take to complete the whole test? Would you change something?
I determined to problem, looked through my notes and lectures for material concerning these topics and applied it to the problem.
I found the layout of the previous test very helpful and was able to use it to layout my own test and keep it organized.

c. What new concepts have you learned?
I learned how to evaluate a pipe system and to split it up into different sections. I also see the importance of using the correct units for each problem.

d. Where you think engineers use those concepts (provide specific examples)?

These concepts are commonplace in pipeline work when determining the velocity and specific pipe needed for a system. I've seen this work don't on aircraft carriers in the naval industry. These ships must supply a large number of fluids all over the vessel, so pipe systems are very important.

e. Where do you think you will be using everything you learned?

In the industry job the I am hired to complete. Whether it be a pipe system for a building or a ship this information is extremely valuable.

f. Do you think what you learn is important for your professional career?

Yes, I do think this will help me in the field work of Engineering Technology,

g. How, when where and why you might use this information or skill in the future?

I have applied for many positions that involve these concepts. The problem-solving skills displaced in this test will help me a lot in the field.

h. Have you been able to apply concepts you have learned in the course to what you do at work or in other courses?

I have taken the Fluid Mechanics lab in a previous semester and this information was used to complete the labs.

I. What areas did you feel you were most successful, or improved the most?

I was able to use the correct calculations and procedures in order to have the equations to input into excel. I should have continued with the iterations for the f value in order to get a lower % difference.

j. How do you see this course's content intersecting with your field or career?

Fluid mechanics is all around us and this course content will be used in every aspect of my future career.

k. How much time did you spend on the test? How was the time organized? What would you do differently? Why?

I spend at least 3 days working on this test. I spend many hours in the library working on the procedure and equations to complete the problems.
If I could do something differently, I would probably take a few more hours on the second problem and text the professor more when I was confused. Overall, I am happy with my submission and will accept any grade given to me.