For every test you archived in your ePortfolio Google drive, you should have a reflection that briefly discusses:

1) 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 test demonstrates multiple objectives, including parallel pipe systems, network pipe systems, using the Hardy-Cross method, pipe minor losses, turbulent flow. The test had an elevated tank with a gate valve to release a fluid into a tanker truck. I had to determine the new flow rate with an upper branch above the branch that already existed. Then on figure 3, we had to determine the flow rate using the Hardy-Cross method on a network pipeline system.

2) 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?

There again the solution shows a lot more detail than what I had on my test. I think there were some similarities. I thought since this was based off of the previous test, I assumed the numbers would be referenced from it. Mistakes I made, were at the last part of doing the square root of the two equations on the first part. The 2nd part, I didn't have this setup the same way at all. If I were taking the test again the advice, I would give myself is to try to think what Dr. Ayala would think or say. There was a lot of detail I would not have known to put in it.

3) 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?

I know this time; I think I did better with following the rubric for the sections of the test. My strengths would be visualizing the system and understanding systems. My weaknesses would be setting up the problem and putting it down on paper correctly, as well as portraying all the details needed, and getting in a hurry. I always tell myself to slow down but apparently not in this case. Trying to get inside your head to know what you are thinking and how you would do these problems. I think my grade would be passing, at least, I hope. My grade, not sure because of the conflicting information on the rubrics versus what rubric called for. Also, the solution was not set up the same as the previous 2 tests with the first part of the rubric having everything labeled out per section. I'm not sure how to grade my test.

4) Discuss the following:

a. What issues did you encounter in completing the test? How did you troubleshoot them?

I looked at this as if I really had to take modify the existing design. I looked over this a multitude of times to work on figuring this out.

b. What steps did you take to complete the whole test? Would you change something?

I tried to make sure I answered all the questions. In the test, I would have gone about doing something differently. This subject is by far not my strong suit. This is a difficult subject for me to grasp all the ins and outs.

c. What new concepts have you learned?

Trying to make parallel pipe systems and network pipeline systems work.

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

They probably use this at large farm for tractor sprayers, oil tanker fillups, etc…

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

I am not sure where I will be using what I have learned from this test in my current job. Currently, I do not have these types of problems or designs where I work. I do see where I will be using other topics being discussed in the class in my career.

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

Maybe in future job positions.

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

If I am looking for a job in the future, I can expand my search with these new skills I am learning.

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

Not yet.

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

I'm not sure I would be the most successful at working on these types of problems. Doing this type of work, you can see that experience goes a long way. There is always room for improvement no matter what.

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

The instrumentation sections were informative. We measure airflow a lot where I work. So some of what we learned with the instrumentation

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

I spent close to 5 days working on the test and pre-test for 2-3 hours for each of those days. I think maybe working with our groups on the next test would be beneficial to may be help learn things at a similar pace and asking questions to our peers might be easier.

In the reflection, you should describe the test using facts and feelings providing relevant details. You should identify strengths and weakness of the test and connect the test with experience. Finally, you should also clearly explain the quality of the artifact and give insight and state reason for judgment.
You have the option of writing your reflection on a document or you could also create an audio. In either of the cases, you must upload the reflection to your website.

This test was a challenge, a lot of gears turning and reading notes and re-watching lectures and going over the lecture problems. I am not a good test taker. I have never been a good test taker. I excel at hands-on task and completing task on time. Like I mentioned earlier, this is not a strong subject for me.

WRITING RUBRIC

1. Purpose	0.5/10.0 out of 0.5/10.0
2. Drawings	1.0/10.0 out of 1.0/10.0
3. Sources	1.0/10.0 out of 1.0/10.0
4. Design considerations	1.0/10.0 out of 1.0/10.0
5. Data and variables	0.5/10.0 out of 0.5/10.0
6. Procedure	2.0/10.0 out of 2.0/10.0
7. Calculations	2.0/10.0 out of 2.0/10.0

8. Summary 0.5/10.0 out of 0.5/10.0
9. Materials 0.5/10.0 out of 0.5/10.0
10. Analysis 1.0/10.0 out of 1.0/10.0

TOTAL **10.0/10.0** out of 10.0/10.0

1st PROBLEM)

1. Label branches and put reference 1/16 out of 1/8
2. Apply Bernoulli's correctly and get two equation 2/8 out of 2/8
3. Define energy losses for both branches 2/8 out of 2/8
4. Get flow rate (iteration process) 1/8 out of 2/8
5. Correct results? 1/8 out of 1/8

2nd PROBLEM)

1. Define loop, flow directions, and initial guess (flow) 1/7 out of 1/7
2. Create spreadsheet/table with all calculations
    a. Negative flow in one of the branches 1/7 out of 1/7
    b. Handling of the minor losses 1/7 out of 1/7
    c. "k" calculation, and kQ^2, 2kQ 1/7 out of 1/7
    d. deltaQ calculation & Q correction to next iter 1/7 out of 1/7
    e. Iterations and %error calculation 1/7 out of 1/7
3. Correct results? 1/7 out of 1/7

The test did not say to create an excel spread sheet for the second part…

FINAL GRADE:

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If getting everything right:

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(90/2)*(8/8 + 7/7) = 90???