**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

For each of the below questions, write a short sentence or two to express (in your own words) your answer. Keep the answers short, but use complete, correct, English sentences.

If it helps to clarify the questions, feel free to mentally prefix all the questions with the phrase "According to the video…"

1. After you’ve watched all the videos, please answer this question:
Of all the videos that you watched, if you could pick one video to be re-recorded by the instructor outside of class which would you choose? Why?
(Keep in mind the recording outside of class will omit any pauses from the instructor answering student questions, have less hemming and hawing, etc, and generally be more concise)

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| < Write your answer here > |

**VIDEO:** [**Unit Testing Overview**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_2_UnitTestingOverview/142_2_UnitTestingOverview.html)

1. Unit tests allow you to automate what sort of actions?

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| < Write your answer here > |

1. What does it mean for a test to **pass**?
What does it mean for a test to **fail**?

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| --- |
| < Etc. > |

1. What sort of program does unit testing work best with?

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1. Describe in your own words, briefly and intuitively, what a prime number is.
Is 1 a prime number?

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1. Given an isPrime function, what sorts of numbers should you test? For each “category” of numbers make sure that you explain WHY you should test numbers in that category.

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1. Does unit testing guarantee that your software works? If not then why do we do it?

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**VIDEO:** [**NUnit Intro**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_3_NUnit_Intro/142_3_NUnit_Intro.html)

1. What goal does NUnit try to achieve?

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1. How is NUnit better than writing a Console-based program to test your programs?

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1. In this class, are you expected to write your own unit tests?

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1. In this class, what are you expected to do (with regards to NUnit / unit testing)?

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1. Fill in the blank: “For the autograded/NUnit-enabled starter projects, each solution will now contain multiple \_\_\_\_\_\_\_.”

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1. Give some examples of what VS projects are typically used for in a shipping product.

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1. By default, what happens when you tell Visual Studio to run the starter project? What will you see, and what will that allow you to do?

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1. Using that NUnit GUI, how do you run all the tests?

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1. When you run the NUnit tests, what does a red circle icon (with an X through it) mean?

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1. How do you run one individual tests?

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1. How do you decide which test to work on first?

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1. If you think you’ve found an error in one of the tests, what should you do?

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1. While examining a failing test, how do you see what Console output (if any) that the test (or the tested code) produced?

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1. How can you ask Visual Studio to find the name of, say, a failing test (even if you don’t know which file to look in)?

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1. Which file are all the tests located in?

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1. A category in NUnit corresponds to what in the C# code for the tests?

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1. Each test in NUnit corresponds to what in the C# code for the tests?

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1. What markings are put into the C# source code in order to identify test categories and tests to NUnit? (Be sure to clearly identify the marking for each one, and to clearly identify where the marking is put)

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**VIDEO:** [**Making the tests pass (by changing the tests - only to learn NUnit)**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_4_NUnit_MakeTestsPass/143_4_NUnit_MakeTestsPass.html)

1. Explain (using the example in the video) how the **Assert.That** method works.

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1. When a test fails (because **Assert.That** tested something that ended up being false), where does NUnit display that message that was provided to **Assert.That**?

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1. When you change any code (normally your answer, but for this video the code from the test), you can reload the tests (and your code) by either quitting the NUnit GUI and restarting it, or by doing what else?

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1. What’s a good trick to check if I really am running the newest version of my code in NUnit?

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1. If NUnit’s GUI doesn’t seem to reload tests when you tell it to, nor does shutting down the NUnit GUI cause it to reload all the tests, what is a last-ditch, stop-gap, “limp-along” measure that should definitely cause NUnit to reload the tests (including your answers)?

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**VIDEO:** [**Running a console app (using Set as Startup Project) ; How to hand-in stuff**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_5_StartupProject_Handin/142_5_StartupProject_Handin.html)

1. What is the “startup project” in Visual Studio?

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1. How do you change the startup project?

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1. If you want to go back to using a normal Console project (like you’ve been doing in previous weeks), how do you do that?

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The second half of the video (more or less) talks about how to hand in your work. There are no questions about that part, but make sure that you pay attention since you are expected to follow the directions explained in the video.

**VIDEO:** [**Producing your own gradesheet**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_6_ProduceGradesheet/142_6_ProduceGradesheet.html)

1. In order to produce a gradesheet, which project must be set as the Startup Project?

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1. Which file do you need to modify to produce a gradesheet?

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1. What change do you need to make in order to have the test runner program produce a gradesheet?

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1. For each category of tests, what causes points to be deducted from your score?

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1. In the .HTML file that explains your grade, where is the raw grade located?

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1. Give an example or two of modifications that may be made to the raw grade in order to determine your final/actual/overall grade:

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1. How do you switch things around so that NUnit will resume running the GUI?

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**VIDEO:** [**Basic Unit Test**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_7_BasicUnitTest/142_7_BasicUnitTest.html)

1. What is the basic pattern for doing the autograded Pre-Class Exercises?

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1. How can you ask Visual Studio to show you the definition of a method?

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1. Explain the following line of code briefly and intuitively:
bool correctAnswer = (studentAnswer == expectedAnswer);

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**VIDEO:** [**Capturing Output From Your Code**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/142_8_OutputCapturing/142_8_OutputCapturing.html)

1. How can you copy the message from the “Errors And Failures” panel in NUnit?

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1. In C#, what does the @ sign mean when it’s placed immediately in front of a string literal?

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1. What method in the test begins the process of capturing all the output that your program produces? What method ends the process and returns the captured output?

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1. What does “\r\n” mean?

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**VIDEO:** [**Deciphering tests that use the [Value] attribute**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/07_Values/07_Values.html)

1. Briefly, what does the Unit\_Test\_Values test actually do?

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1. How does the **Values** attribute affect how NUnit runs the test named **Unit\_Test\_Values**?

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1. If a test has the Values attribute on two separate parameters, how will NUnit run those tests?

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1. How will the NUnit GUI display any test that has at least one parameter marked with the Values attribute?

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**VIDEO:** [**Deciphering tests that use the [TestCase] attribute**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/08_TestCase/08_TestCase.html)

1. What is the TestCase attribute applied to? What is the Values attribute applied to?

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1. What does the TestCase attribute do?

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1. How is the TestCase different from marking all the parameters with Values attributes?

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1. How will the NUnit GUI display any test that is marked with the TestCase attribute?

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**VIDEO:** [**Deciphering tests that implicitly use the [SetUp] attribute**](http://209.189.201.185/mpanitz/Video/BIT_142/VideosWithQuizzes/L08/09_Setup_Method/09_Setup_Method.html)

1. If you look at a test and it appears to be incomplete (variables aren’t defined and/or initialized, for example), how might NUnit be doing the initialization work that will need to happen before the test can be run?

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1. What causes a method to be an NUnit setup method?
What does NOT cause a method to be an NUnit setup method (that was specifically mentioned in the video)?

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1. When is the SetUp method called?
Is it called before a method that does not use any of the initialization that is done by the SetUp method?

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