

Taking Tests on the Gateway WebTests System

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1 Getting Around the System

You can get everywhere you need to go from the system homepage at

<http://calculus.unl.edu/students>

(see Figure 1). If you ever need to get back to the system homepage, click on the icon labelled “home” at the bottom of any page and it’ll bring you back there.

From the system homepage you can:

- Register on the testing system (Section 2),
- Find a test in your class (Section 3),
- Access your old tests (Section 5), and
- Read on-line help pages.

Either click on the link for the service you need in the orange left-hand column, or click on one of the links in the descriptive part of the page.

2 Registering

If you want to take a test on the system (other than a practice test—see Section 4) then you’ll need to register with the system. Registering simply involves telling the system your name and student ID, and choosing a login name and password for yourself. Anyone can register for a class on the system by simply filling out the registration form. In fact you might accidentally register for the wrong class if you fill out the form wrong, so take care that the class you pick when you register is really the one you’re in!

2.1 How to Register

From the homepage, click on the link to “Make Record”, and you’ll come to the registration form shown in Figure 2. Enter your name and student ID in the fields provided. If you have an email address, you can enter it too; your instructor might find it useful if he/she wants to get in touch with you.

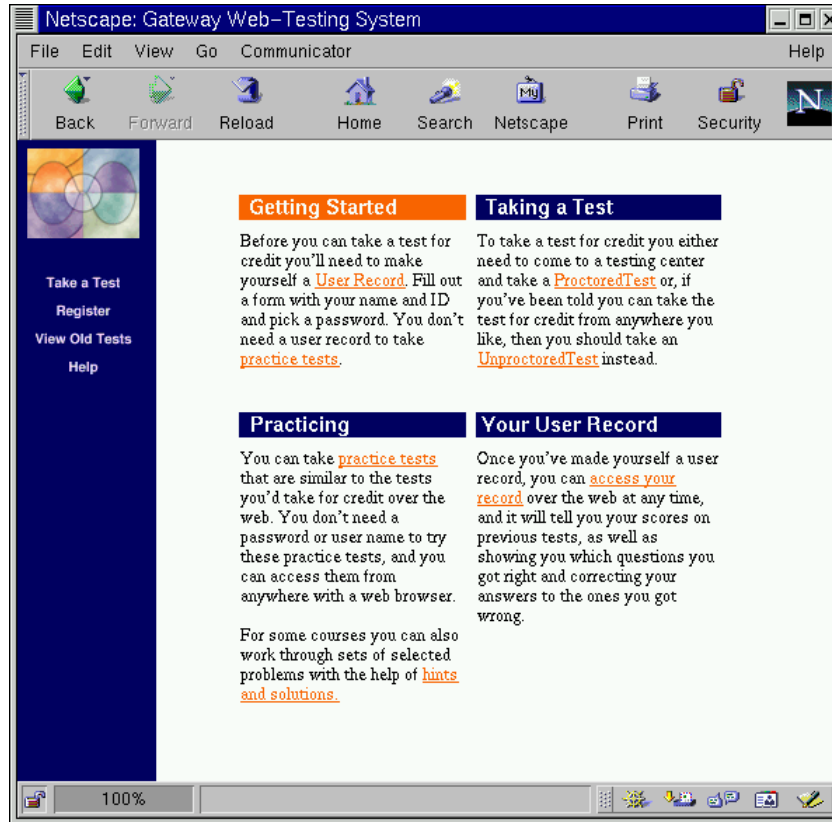


Figure 1: The system homepage.

Choose the class that you're in from the drop-down list at the bottom of the page. *Make sure you pick the right class!* If you register in the wrong class, your instructor will not see your test results! (Sometimes, if you come to this page from somewhere other than the homepage, the system already knows which class you are in. In that case it omits the drop-down menu, and shows you your class in red.)

You also need to pick a **login** and **password** for yourself. You should remember your login and password and use them whenever you use the system in the future. That way your instructor will be able to see your test results arranged together, and you will be able to go back and see all your past tests on the system.

Just like many other computer systems (perhaps your email account, or a UNIX account), your login is supposed to be a handle that identifies you on the system, but you don't need to keep it secret. On the other hand, your password is the key that opens up your account. With your password, someone else could look at your old test results or even take tests that seem to be taken by you, so you should keep it secret. If you worry that someone might have stolen your password, you should change it immediately (see Section 5).

Choose a login name for yourself and enter it in the box on the registration form. Most people like to choose either a nickname for themselves, or else their first initial followed by their last name.

Your login name must be at least 3 and no more than 8 alphanumeric characters. The first character must be a letter, and spaces are not allowed.

Choose a password and type it into the password box on the form. So that no one else can look over your shoulder and see your password, it doesn't appear on the screen. But to make sure that you typed it in right, you should retype it again in the second password box. You should choose a password that you can remember but that it hard for anyone else to guess. *Never use your login name as your password!* And avoid using nicknames, names of friends or pets as a password because they are easy to guess.

Your password must be at least 5, and no more than 12 alphanumeric characters long. Spaces are not allowed.

Once you've filled out the registration form, press the "Press to continue" button at the bottom of the screen. If you've made any mistakes filling out the form, the system will let you know and return you to the form. Otherwise, you'll have a chance to review your registration before it is made final. Once you've created your user record you'll be offered the chance to take a test in the class you just registered for.

2.2 Help! I forgot my password!

If you forget your password (or your login name) you have two options:

- You can create a new registration record for yourself with a new login name (the system won't let you reuse the same login name). This has the disadvantage that you won't be able to go back and see the results of tests you took with your old login, but at least the procedure is quite straightforward and you can do it yourself.
- Your instructor can remind you of your login name. Your instructor does not have access to your password, but he/she *can* change your password to something else and tell you what your new password is. (Your instructor would go through the same process described in 5.1, using his/her password in place of your old password.)

3 Taking a Test

From the homepage, click on the link "Take a Test" and you'll come to a series of choices which will help you select your test.

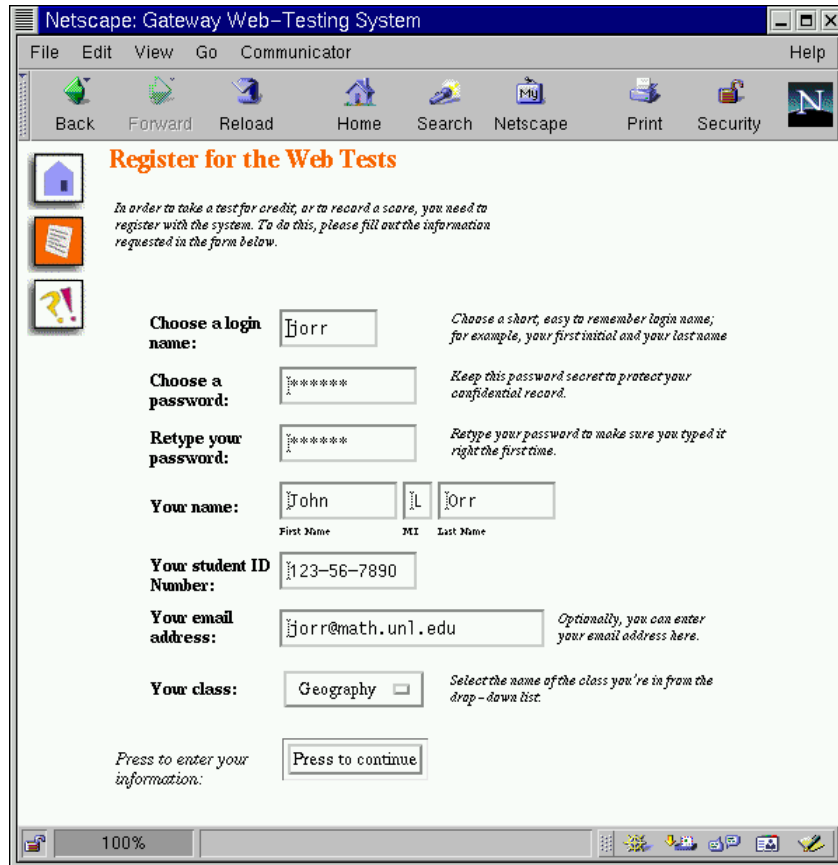


Figure 2: The registration form.

3.1 Selecting your test

To choose your test, you need to go through the following steps:

- Select the class you are in,
- Choose the test you want to take,
- Select the mode to take the test in, and
- Log in with your login name and password.

Some of these steps will be omitted if there is only once choice available, so typically you'll select your test with fewer steps.

Once you've logged in to take the test you selected, the system will check to see if there are any other tests you are currently working on. A test stays current in the system until you have it graded or start a new one, so the system will warn you that you

have a current test even if it finds a test that you started a long time ago and abandoned without ever getting graded. If there is a current test still active on the system, you have three choices:

Resume the old test: In some circumstances you'll need special permission to do this after a long delay.

Start a new test: This will overwrite the old test, and all your work on that test will be lost.

Grade the old test: This will give you a grade for your old test and save its results on the system. Subsequently you can take a new test without losing the result of the old test.

3.2 The test page layout

Once you have selected your test, you'll come to the first page of your new test, which will look like Figure 3. Check that the title at the top of the screen describes the test you want to take. The buttons immediately under the title are the controls that you use to move around the test and to have it graded. As ever, there's a set of buttons at the bottom of the page to get help and to return to the homepage.

The rest of the page is taken up with one or more questions from the test. Typically a test is spread over several pages with only one or two questions on a page. At the head of the question (just under the horizontal line) is a count of which page of the test you're on, and how long you have left to work on the test.

3.3 Answering a question

Most questions have some instructions on what type of answer you're supposed to give. The questions you'll see will all be one of the following types:

Multiple Choice: Select one or more of the options by clicking on the buttons beside the options. Some multiple choice questions only let you select one option, while others expect you to select all relevant choices.

Formula: Some questions ask you to enter a number or a formula into a text box. Depending on the context, you may be asked for a formula, a dimensionless number, a number with physical dimension (i.e. units), or a list of numbers or formulas. Look under the text box for information about what format of entry the question expects.

If you're unsure about the format of the formula you gave as your answer, make sure to press the "Preview" button beside the formula entry box to see your formula presented in standard mathematical notation (see Figure 4). For more information on how to enter mathematical formulas, see Appendix A

Fill-in-the-blank: These questions have drop-down menus scattered though the text of the question. Select the appropriate choice from each of the menus to make the text read as a correct statement.

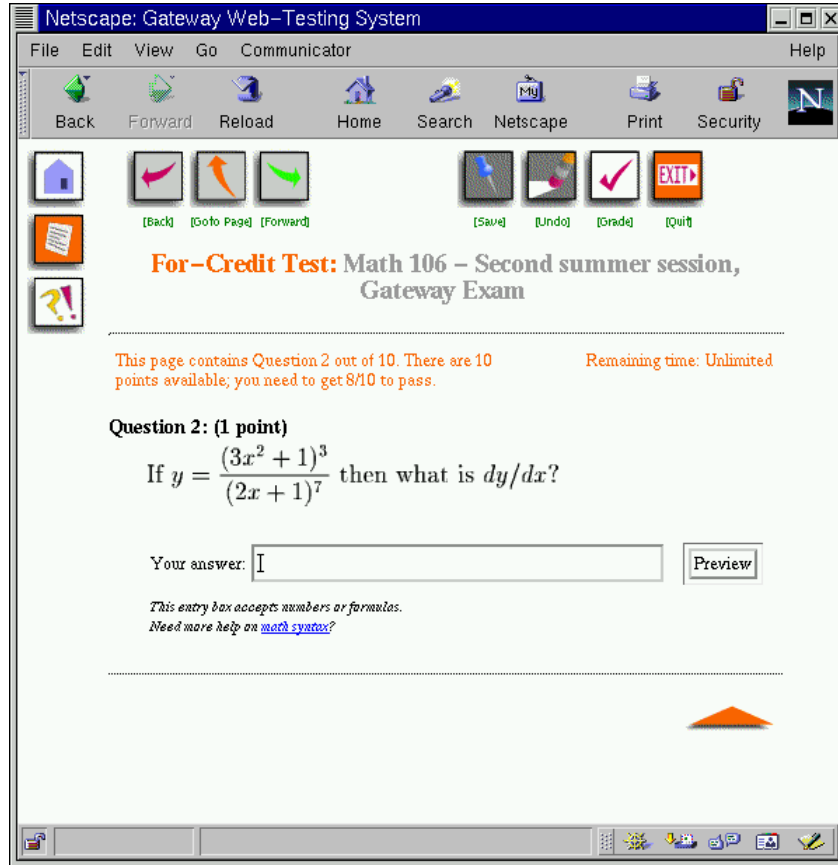


Figure 3: A typical page in a test.

3.4 Moving around

You can step from one page to the next or previous one using the “Next” and “Back” buttons at the top of the screen. If you can’t see the buttons after you’ve finished working on a question, scroll back to the top of the page to find them. *Don’t use your browser’s back or forward buttons inside of a test (see Figure 5) as this may result in the system losing the answer you gave to the last question you were working on!*

If you want to jump around your test, click on the “Goto” button at the top of the screen. This brings you to a list of all the questions in the test. Select the question you want and your browser will go to that question.

3.5 Getting your test graded

When you’ve answered all the questions you can on your test, press the “Grade” button. The system takes a quick look over your test and looks for any questions which you

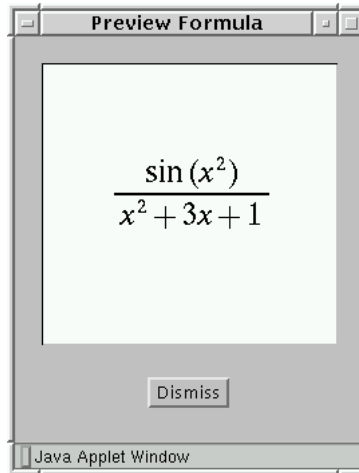


Figure 4: Preview window for the entry $\sin(x^2) / (x^2 + 3x + 1)$

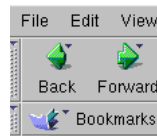


Figure 5: Don't use the browser navigation buttons in a test!

have left blank or which you have made a typo in (such as mathematical formulas which have missing parentheses). If it finds any questions like that, it brings up a warning screen which lists the questions you might want to review before having your test graded. If you want to go back you can either click on the "return to question sheet" button, or select the particular question you want to go back to. If you don't want to return to your test, click on the "grade the test anyway" button.

If there are no questions that the system needs to warn you about (or if you chose to disregard the warning), your test will be graded immediately.

3.6 Your results

Once the system has graded your test it will report on the score you made. If the test you're taking had a pass/fail score assigned to it then it'll also tell you whether you passed or failed, and, if you failed, how close to passing you were.

On the same page you get your test results, there's also a button to see your test in more detail. Pressing this gives you a list of all the questions you answered, together with feedback on the questions you got wrong. You may want to print this page out, especially if you want to discuss the results of your test with your instructor. However, the system stores all of the tests results, so if you want to go back and see this page in the future it will always be available for you (see Section 5).

4 Practice Tests

Some tests on the system are given as practice tests. You don't need to register a login name to take a practice test, but you also can't get credit for taking a practice test, because there's no record kept on the system of any practice tests you take. You select a practice test the same way as any other (see Section 3.1) and you navigate it and have it graded in the same way as any other (see Sections 3.4 and 3.5).

5 Looking at Your Old Tests

The system keeps a record of all the tests you've taken (except practice tests). From the system homepage select the link "View Record", and log in with your login name and password (make sure you select the right class on the drop-down menu).

The page you come to will give a listing of all the tests you've completed on the system. The list will tell you the score and time spent on each of these tests. If you click on the button to the left of a test summary (and press "View Old Test" at the top of the page) you get a print-out of the questions you answered on that test, together with feedback on the questions you got wrong. Your instructor can also access this page, so you can always ask him/her to take a look at a particular test you took. Make sure to tell him/her the date and time of the test.

5.1 Changing your password

It's a good idea to change your password from time to time to reduce the chances of someone else using it. And if you ever think someone has stolen your password, you should change it immediately!

Log on to the "View Record" page as described in the last section, and press the "Change Password" button at the top of the page. You'll be asked for your old password again (as a security precaution) and also to enter your new password twice (just as you did when you first registered). As before, your new password must be at least 5, and no more than 12 alphanumeric characters long, spaces are not allowed, and, of course, the two new passwords must match. If all goes well, your new password will be in effect as soon as you click on OK at the top of the page (and your old password will no longer work). Make sure to remember your new password!

A Mathematical Formulas

Some questions ask you to type in a mathematical formula or expression. You can type in formulas using standard mathematical notation and, if it looks right, the computer should understand it. A good rule of thumb is that the computer will understand any formula that the TI-85 will graph. Thus, the computer will understand formulas like:

$$x^2-2x+1 \quad 2\sin(x) \quad (x^2+1)e^{-x^2}$$

The most common mistake people make is to forget to put in enough parentheses to make it clear what they mean. You can never go wrong by putting in too many brackets!

You can type an asterisk (ie “*”) for multiplication, or just write two letters or a letter and a number together (like “2x”). Use the caret, “^” for exponentiation, and the letter “e” for 2.718... (so that the exponential function is “e^x”). Write pi for 3.141...

A.1 Functions

The names for common mathematical functions (sin, cos, etc.) are just what you would expect. The square root function is `sqrt(x)` (or you can type “x^(1/2)” or “x^0.5” instead). The inverse trig functions are `arcsin(x)`, `arccos(x)`, and `arctan(x)`. Trigonometric functions are all set to work in radians.

The functions and operations you can use are:

Arithmetic		Numbers	
+	Addition	e	$e = 2.71828\dots$
-	Subtraction	pi	$\pi = 3.14159\dots$
*	Multiplication	2.9E8	e.g. 290,000,000
/	Division		
^	Exponentiation		
Trigonometric		Miscellaneous	
sin	Sine	sqrt	Square root
cos	Cosine	log	Logarithm (base 10)
tan	Tangent	ln	Natural logarithm
arcsin	Inverse sine	abs	Absolute value
arccos	Inverse cosine		
arctan	Inverse tangent		
sec	Secant		
csc	Cosecant		
cot	Cotangent		

A.2 Variable names

You can use any letter for a variable name, but you should always use the same letter that is used in the question. If the question asks you to differentiate t^2 then the answer `2x` will be graded wrong. Also note that the system is case sensitive; the variables `x` and `X` are different variables!

Some questions are set in what’s called “restricted mode”. This means that the only mathematical functions you can use in a question in this mode is `sqrt(x)`. The reason there is a restricted mode for some questions is so that someone can’t answer a question like “What is `sin(pi/4)`?” by typing “`sin(pi/4)`” for the answer. Instead they would have to give the answer “`1/sqrt(2)`”.