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## Demo

This set is visible to students.

▲ Up

Warning -- there may be something wrong with this question. Please inform your instructor including the warning messages below.

[Download a hardcopy of this homework set.](#)

### Set Info [edit]

This is a demonstration set designed to illustrate the range of types of questions which can be asked using WeBWorK rather than to illustrate a typical calculus problem set.

**1. Simple numerical problem.** A simple problem requiring a numerical answer. It illustrates how one can allow WeBWorK to calculate answers from formulas (e.g. an answer such as  $\sqrt{3^2 + 4^2}$  can be entered instead of the answer 5.). It also shows an example of feedback on the correctness of each answer, rather than grading the entire problem.

**2. Graphs and limits.** The graph in this example is constructed on the fly. From the graph a student is supposed to determine the values and limits of the function at various points. The immediate feedback on this problem is particularly useful, since students often make unconscious mistakes.

**3. Derivatives.** An example of checking answers which are formulas, rather than numbers.

**4. Anti-derivatives.** This example will accept any anti-derivative, adjusting for the fact that the answer is only defined up to a constant.

**5. Answers with units.** Try entering the answer to this question in meters (m) and also centimeters (cm).

**6. A physics example.** Includes a static picture.

**7. More graphics.** An example of on-the-fly graphics. Select the graph of  $f$ , it's derivative and it's second derivatives.

**8. JavaScript example.** I'm particularly fond of this example. The computer provides an "oracle" function: give it a number  $x$  and it will provide you with the value  $f(x)$  of the function at  $x$ . Using this, calculate the value of the derivative of  $f$  at 2. (i.e.  $f'(2)$ ). Students are forced to use the Newton quotient, since there are no formulas to work with. I don't think this problem could be asked as written homework.

**9. Java example.** This gives an example of incorporating a java applet which can be used experimentally to determine answers for WeBWork questions. This particular example is somewhat forced. There is a lot of room for experimentation and improvement in combining these two technologies.

**10. Palindrome.** To answer this problem enter any palindrome. This problem illustrates the power of the "answer-evaluator" model. For each problem the problem designer writes a function which accepts a student's answer and produces a 0 or 1 (for incorrect or correct). Usually this is done by comparing with an answer given by the problem designer, but in this case the function checks if the answer is the same forward and backward.

**11. Lite Applet.** An example of using the map lite applet

**12. Lite Applet.** An example of using the map lite applet where the cities are chosen randomly.

**13. JavaScript** The Josephus problem. Currently the javaScript is a bit too complicated, since it uses frames. With a little more work one might be able to embed this in a PG problem.

Use this box to give information about this problem set. Typical information might include some of

Information might include some of these facts:

WeBWorK assignment number Demo is due on : 01/01/2006 at 02:00am EST.

The primary purpose of WeBWorK is to let you know if you are getting the right answer or to alert you if you get the wrong answer. Usually you can attempt a problem as many times as you want before the due date.

However, if you are having trouble figuring out your error, you should consult the book, or ask a fellow student, one of the TA's or your professor for help. Don't spend a lot of time guessing -- it's not very efficient or effective.

You can use the Feedback button on each problem page to send e-mail to the professors.

Give 4 or 5 significant digits for (floating point) numerical answers. For most problems when entering numerical answers, you can if you wish enter elementary expressions such as  $2^3$  instead of 8,  $\sin(3\pi/2)$  instead of -1,  $e^{\ln(2)}$  instead of 2,  $(2+\tan(3))*(4-\sin(5))^{6-7/8}$  instead of 27620.3413, etc.

Here's the [list of the functions](#) which WeBWorK understands. Along with the [list of units](#) which WeBWorK understands. This can be useful in physics problems.

Name	Attempts	Remaining	Worth	Status
<a href="#">Problem 1</a>	0	unlimited	1	0%
<a href="#">Problem 2</a>	0	unlimited	1	0%
<a href="#">Problem 3</a>	0	unlimited	1	0%
<a href="#">Problem 4</a>	0	unlimited	1	0%
<a href="#">Problem 5</a>	0	unlimited	1	0%
<a href="#">Problem 6</a>	0	unlimited	1	0%
<a href="#">Problem 7</a>	0	unlimited	1	0%
<a href="#">Problem 8</a>	0	unlimited	1	0%
<a href="#">Problem 9</a>	0	unlimited	1	0%

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## WeBWork Warnings

WeBWork has encountered warnings while processing your request. If this occurred when viewing a problem, it was likely caused by an error or ambiguity in that problem. Otherwise, it may indicate a problem with the WeBWork system itself. If you are a student, report these warnings to your professor to have them corrected. If you are a professor, please consult the warning output below for more information.

### Warning messages

- `defined(%hash)` is deprecated at `/opt/webwork/pg/lib/WeBWork/PG/Translator.pm` line 1673.  
(Maybe you should just omit the `defined()`?)
- `defined(%hash)` is deprecated at `/opt/webwork/pg/lib/Value/AnswerChecker.pm` line 1566.  
(Maybe you should just omit the `defined()`?)

### Request information

Time	Tue Feb 22 12:50:03 2011
Method	GET
URI	/webwork2/myTestCourse/Demo/

This set is visible to students.