Site Layout and Features

Course navigation

Click [+] to access the menu and **navigate** to different units.

Jump to a question.

Download PDF

Download a PDF version of the question set that you can print and answer on paper. **Note:** due to randomization, the questions in the PDF may not match the questions on your screen exactly.

TestMe

Generates a random problem set. Excellent for doing practice quizzes for reviewing and preparing for exams.

Randomize Question

This button, if present, will regenerate the question with different parameters, giving you many more opportunities to practice.

Share

If you like the questions, need help, or would like to challenge others, share with your friends, tutor, or instructor!

Breadcrumb

Indicates the current course and unit.

Find Question by Code

Enter question codes from the printable PDFs to check your answers.

Math Palette

Helps you input math functions. See the Inputting Math section on Page 2.

Question Statement

Read the question carefully and input your answer below.

Question Type

Different question types allow you to input different answers. See the Question Types table on Page 2.

Input area

Type your answer in this area to try out the question.

Answer Preview

Displays your answer as it will be interpreted by the site. The preview may consist of a prefix (which may give a hint as to what kind of answer is expected), your answer, and a postfix (which may give units of measure, or some other text that will come after your answer). In this example, there is a prefix, but no postfix.
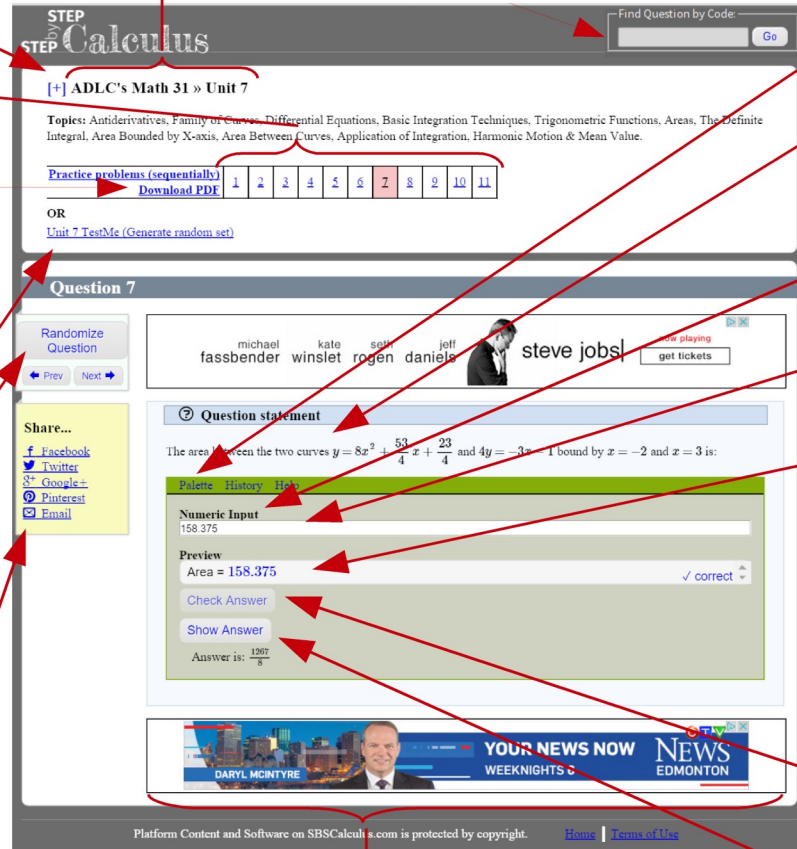
Check Answer

Submit your answer to check if it is correct or incorrect.

Show Answer

Display the correct answer. You may need to submit an attempt before showing the correct answer.

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Step by Step Calculus can be found at http://sbscalculus.com. This guide was updated on November 16, 2015 and is copyrighted.

Question types

Type	Description	Examples
Multiple Choice	Select the single best answer from the choices given.	-
Multiple Select	Select all the correct answers from the choices given.	-
Numerical	A numeric answer. Your answer does not need to be a decimal number.	3.14, pi, -sqrt(2)
Factored Form	A polynomial in factored form.	(x-2)(x+1) **not allowed:** x^2-x-2
Expanded Form	A polynomial in expanded form.	x^2-x-2 **not allowed:** (x-2)(x+1)
Single Variable Expression	An expression containing zero or one variable(s).	4sin(2x)-ln(x), 22b+pi/2, 42 **not allowed:** ax-b, y=3x
Expression or Equation	An expression or equation containing any number of variables.	z=3x+sin(xy)
Interval or Set	An interval, which may be open, closed, or half-open; or a set of numbers enclosed in braces; or a union of intervals and sets using 'U' to denote the union.	(1,2]U{5,6}, {}, [4,inf), (-inf, inf)
Point or Vector	A point or a vector entered as a list of comma-separated coordinates or components. Alternatively, vectors may be entered as row matrices (with components separated by '\'), or as column matrices (with components separated by '&').	(1,2), (1 \ 2), (1 & 3)
Matrix	A matrix with elements entered row by row. Elements within a row are separated by '&', and rows are separated by '\'.	(1 & 2 \ 3 & 4)

Inputting Math

The first menu item called Palette will open a math palette to help you input math. Each button will either insert the math displayed on the button, or open a menu giving more choices for symbols.
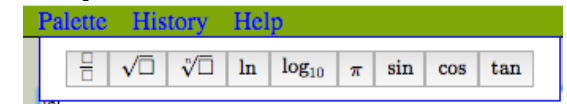
The table below show some commonly used math expressions.

Type	To get	Comment
pi, e, inf, -inf	$\pi, e, \infty, -\infty$	special constants
1/2	$\dfrac{1}{2}$	fractions
x^2, x^(1/2)	$x^2, x^{\frac{1}{2}}$	exponents
sqrt(2), 3 root(x)	$\sqrt{2}, \sqrt[3]{x}$	roots
ln(e), log_10(x)	$\ln(e), \log_{10}(x)$	logarithms
sin(x), cos(x), tan(x), sec(x), csc(x), cot(x)	$\sin(x), \cos(x), \tan(x), \sec(x), \csc(x), \cot(x)$	trig
arcsin(1), sin^-1(x), ...	$\arcsin(1), \sin^{-1}(x), ...$	inverse trig
{}	$\varnothing$	empty set

FAQ

Q: Some equations are too small to read. How can I view them?
A: There are two ways to increase the size of the math. The first way is to use your browser's zoom function by either typing Ctrl-+ (Command ⌘ instead of Ctrl for Mac) or by holding down Ctrl and using your scroll wheel. You can return to the normal zoom level by typing Ctrl-0. The second way is to enable zooming on the math by right-clicking on the math, which will bring up a menu. Go to "Math Settings", then "Zoom Trigger", and select either "Hover", "Click", or "Double-Click". You may then zoom into the math by either hovering over, clicking on, or double-clicking on the math.

Q: Why does the preview not match my answer exactly?
A: The preview may be adjusted in certain ways in order to improve clarity. We eliminate parentheses in some places where they are clearly unnecessary. For example, in the expression "1/(x+1)", the parentheses are necessary to indicate that the denominator is the "x+1" rather than just "x". However, the preview for that expression is $\frac{1}{x+1}$, and the parentheses are unnecessary here since the denominator is clear. On the other hand, parentheses are added in some cases to avoid ambiguity. For example, for the expression "sin x * y", the preview is $\sin(x)y$, which makes it clear that the sin is only applied to x, and not to x*y.

Q: I'm sure my answer is correct. The answer shown is incorrect OR answer is not unique/complete.
A: If you truly believe that your answer is being graded incorrectly, email: info@muchlearning.org with the unit & question # and screen shot or picture of the screen.

Q: My input should be the same as the "Show Answer"
A: If you truly believe that your answer is being graded incorrectly, email: info@muchlearning.org with the unit & question # and screen shot or picture of the screen.

Q: Check Answer gives an error (or just hangs)
A: If a "Server error" is given, make sure that your answer is in the right format for the answer type. You may submit as many attempts as you wish.
If your answer is in the right format and the problem persists, email: info@muchlearning.org with the unit & question # and screen shot or picture of the screen.

Hints and Pitfalls

- Check the prefix and postfix.
  Common mistakes: answering in the wrong units (e.g. postfix is km, but your answer is in meters).
- When using a variable(s), make sure you use the same variable(s) as in the question statement.
  Common mistakes: typing "sin(x)" instead of "sin(theta)".
- Inputting math symbols is case sensitive.
  Common mistakes: typing "Pi" instead of "pi".