

The AcroT_EX Online Assessment System

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The following are the rules for entering answers in the math fill-in questions for the AcroT_EX Online Assessment System located at URL:

<http://www.math.uakron.edu/~dpstory/tutorial/online/>

Rules for Entering Math

When responding to a Math Fill-in question, you answer by typing in your answer. Use the following notation to enter your answers.

- Use +, -, / for addition, subtraction and division, respectively. Thus $3 + \frac{x}{2}$ is typed as $3 + x/2$. Use parentheses to delimit the scope of your operations, type $x/(2+x)$ to mean $\frac{x}{2+x}$. Without the parentheses, the computer would interpret $x/2 + x$ as $\frac{x}{2} + x$.
- Multiplication can be denoted either by * or by juxtaposition: Type $4*x$ or $4x$ for $4x$.
- Use ^ to indicate powers: Type $4x^3$ for $4x^3$; $12x^{-6}$ for $12x^{-6}$. For more complex exponents, use parentheses to characterize the exponent, type $4^{(x+1)}$ to mean 4^{x+1} .
- Use parentheses to delimit the argument of a function; i.e., type $\sin(x)$ rather than $\sin x$.
- Use parentheses to define the *scope* of an operation: For example, type $4x(x^2+1)^3$ for $4x(x^2 + 1)^3$; $4^{(2x+1)}$ for 4^{2x+1} .
- To raise a function to a power, such as $\sin^2(x)$, type either $(\sin(x))^2$ or $\sin^2(x)$.
- You can also use brackets [] or braces { } to delimit a mathematics expression.
- Functions you may use:
 - Trig: sin, cos, tan, cot, sec, csc;
 - Inverse Trig: asin, acos, atan;
 - Log: ln (natural log), or use log; e.g. ln(x) or log(x), both of these refer to the natural logarithm.
 - Exponential: The natural exponential function, e^x , can be entered as exp(x) or as e^x.
 - The absolute function, abs(·) can also be written in the usual way |·|; thus, you can type either abs(x) or |x|.
 - Misc.: sqrt, usage sqrt(x) for \sqrt{x} (or, use exponential notation: $x^{(1/2)}$).
- Spaces in answers are ignored, e.g., $4 x$ is the same as $4x$; use spacing, however, to improve readability.

Important: When you enter your answer, use the variables referred to (or implied by) the statement of the question. For example, if the problem statement involves the variable x , use x in your answer, as needed; if the problem statement uses t , use t in your answer. If you enter a function of t when a function of x is expected, you will either receive a error message (for Acrobat Reader 5.0 or above) or there will be no response at all to the entry (for Acrobat Reader 4.0–4.05), so be careful.