edX

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2. Standard notation

Many exercises and problems throughout the course will ask you to provide an algebraic answer in terms of symbols. Please follow the guidelines below when entering your responses. Below your answer textbox, the system will also display, in a "pretty" format, what it has interpreted your input to be. However, this display is not perfect (for example, it does not catch all cases of missing close parentheses) so please also check your text input carefully.

- **Symbols are case-sensitive: a** and **A** are different – make sure to use the correct case as specified in the problem

- **Parentheses:** make sure that your parentheses are properly balanced – each open parenthesis should have a matching close parenthesis!

- **Elementary arithmetic operations:** use the symbols **+** , **-** , ***** , **/** for addition, subtraction, multiplication, and division, respectively

- $1 + bc - d/e$ should be entered as **1+b*c-d/e**

- **For multiplication, use * explicitly:**

  - in the example above, enter **b*c** ; do NOT enter **bc**

  - for $2n\,(n+1)$, enter **2*n*(n+1)** ; do NOT enter **2n(n+1)**

  - although the "pretty" display underneath your answer looks correct if you do not include ***** s, your answer will be marked incorrect!

- **Exponents:** use the symbol **^** to denote exponentiation

  - 2^n should be entered as **2^n**

  - x^{n+1} should be entered as **x^(n+1)**

- **Square root:** use the string of letters **sqrt** , followed by enclosing what is under the square root in parentheses

  - $\sqrt{-1}$ should be entered as **sqrt(-1)**

- **Mathematical constants:** use the symbol **e** for the base of the natural logarithm, e; use the string of letters **pi** for π

  - $e^{i\pi} + 1$ should be entered as **e^(i*(pi))+1**

- **Order of operations:** 1) parentheses, 2) exponents and roots, 3) multiplication and division, 4) addition and subtraction

- $\dfrac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}}$ should be entered as **(1/sqrt(2*(pi)))*e^(-(x^2)/2)**

- **a/b*c** is interpreted as $\dfrac{a}{b}\cdot c$; enter **a/(b*c)** for $\dfrac{a}{bc}$

- When in doubt, use additional parentheses to remove possible ambiguitites

- **Natural logarithm:** although in lectures and solved problems we will sometimes use the notation "log" (instead of "ln"), you should use the string of letters **ln** , followed by the argument enclosed in parentheses

  - $\ln(2x)$ should be entered as **ln(2*x)**

- **Trigonometric functions:** use the usual 3-letter symbols to denote the standard trigonometric functions

  - $\sin(x)$ should be entered as **sin(x)**

- **Greek letters:** use the Latin-character name to denote each Greek letter

  - $\lambda e^{-\lambda t}$ should be entered as **lambda*e^(-lambda*t)**

  - $\mu\alpha\theta$ should be entered as **mu*alpha*theta**

- **Factorials, permutations, combinations:** you will not need enter these for any symbolic answers; do **NOT** use **!** in your answers as it will not be evaluated correctly!

Sample Problem with Symbolic Answers

0 points possible (ungraded)

Each symbolic entry problem will have a Standard Notation button just above the submit button, where you can find the guidelines above. (See the button below.)

To see how the symbolic answer box works, enter the function $2e^{(x-1)^2/3}$ using the rules above. That is, type **2∗e∧((x-1)^2/3)** into the answer box.

Below the answer box, there is a display box that shows how the system interpreted your formula. (You will get an error if you try to enter variables, like z, that are unspecified in the problem. You will get an error as you are typing if you have only one half "(" of a parenthesis. Just continue typing, and when you enter the closing parenthesis ")", the error will go away.)

> 2*e^(((x-1)^2)/3)   ✔

$$2 \cdot e^{\frac{(x-1)^2}{3}}$$

> STANDARD NOTATION

> Submit   You have used 1 of 25 attempts

Any questions?

Click "Show Discussion" below to see discussions on Standard Notation. Remember to search for the topic before adding a new post!

Discussion

Topic: Unit 0 / Standard Notation

<div style="text-align:right">

Hide Discussion

</div>

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? [STAFF] Erroneous grading of Question 3 in Problem 4 of Problem Set 9	2
? [STAFF] Clearly erroneous grading and solution of Question 3 in Problem 4 of Problem Set 9	1
? videos not available Is there any one give us an oficial explanation on this?. If i pay the upgrade, it will be possible to continue downloading and seeing videos without...	4
? Progress ? Since I took the final exam and finished it about an hour ago, the histogram of my progress in the course has disappeared. Any idea how can I se...	8
💬 [Staff] Mistake in Exam 2 Grading Unsure where should I post this? There was a problem in which the answer is 1 and I have 1 but is marked wrong. Can someone help me with this?	3
💬 Impact of the video downloading disabled I am a student of this course from Hong Kong and due to my job nature I need to travel to mainland couple times per week. I started this course ...	3
? [Staff] Missing Download video links Hi, I can no longer see any Download video links for all the lectures. They were there yesterday? Win7/8 Firefox & Chrome.	7
? Videos can only be played using Youtube Since yesterday, when using the app, videos can only be played using Youtube (at least on my iphone). This wasn't the case before. As I cannot ea...	8
? error report Yesterday I left some messages about an error happening with exam 2. I can't read the text but the time is running. Was it fixed? Thank you!	1

💬 **In Problem Set 7b, I got problem 5.3 marked as correct but then deleted it by accident on a later submission. Lost the point.**

The problem I am reporting: It is possible to delete an answer that was marked as correct in later submission and lose a point(s).

1

? [Staff] Incorrect grading for Exam 1 Q3

Hi Staff, just want to flag this bug under the correct topic area. 4/5 of my answers for Exam 1 Q3 were marked incorrect when they were actually …

2

💬 **Olu**

Am not getting the notation after 2*e I tried using ^ but it's still not going

2

? [STAFF] Help, grade changed after course was archived

2

? STAFF: Lecture 16?

Lecture 16 didn't load (17 did). Something still getting worked out?

2