CS 173, Lecture A
Latex homework assignment

1   Instructions

Take this file and rename it by "x.tex" where x is what appears before the @ sign in your email address at illinois.edu (i.e., since my email address is warnow@illinois.edu, I would name my latex file - if I were a student - warnow.tex).

Make sure your latex compiles. Remember, mathematics is enclosed in dollar signs! Thus,

`$x \in B$`

is how we write "x is an element of B".

- Your name (write it here):

- Your email address (write it here):

- Do you have prior experience with LaTeX?

2   Getting Started on learning LaTeX

For the following sentences, replace "For all, exists, subset of, element of, cardinality of, square root, square, union, intersection, complement", etc., by the correct mathematical symbol (e.g., see the textbook, inside the front cover), using LaTeX. You should see the latex file (and its associated PDF) provided for September 4, as most of what you want to write is available there. Try also:

`https://www.sharelatex.com/learn/List_of_Greek_letters_and_math_symbols`

`http://web.ift.uib.no/Teori/KURS/WRK/TeX/symALL.html`

`https://www.overleaf.com`

3   Write some LaTeX!

Rewrite each of these using LaTeX for mathematical notation. Note - getting this exactly right doesn't matter - we are just checking that you *try* to do this and that your latex compiles. Also, we'll help you with latex, so any mistakes you make will be ones we help you fix, and you won't have that same problem again.

1. For all x in set A, x squared is an element of A

2. x divided by y (Note: try to write this so that x is above a line and y is below the line)

3. There is an element y of B such that y-1 is not an element of B.

4. B is a subset of C (Note: this is the same as B is contained in C)

5. The cardinality of the union of A and B is equal to the cardinality of A.

6. The cardinality of the intersection of A and B is larger than the cardinality of B.

7. The ratio of x squared + 1 and the square root of y is 3

8. There are 3 elements in the complement of the set formed by taking the union of A and the complement of B

9. F is a function from the reals to the integers.

Now also write something – two paragraphs (in English) containing at least four sentences, about any subject you like. The point here is just to write something. If you want you can tell us something about the class (e.g., what has been the hardest concept, what's the most fun, etc.). This will not be evaluated – it's just for you to learn how to write using LaTeX.