ASSIGNMENT 1

YOUR NAME

This assignment is due on Tuesday January 15th at the beginning of class. Please submit hard copies of both the .pdf and .tex files. Additionally, please submit the .pdf and .tex files through UTORsubmit.

1. An exercise in LaTeX

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- Please prepare your solution in a LaTeX document with the title ("Assignment 1"), section titles, and bibliography as on this page, but with your actual name and actual email address.
- Please typeset the following formula and display it in the "equation" LaTeX environment.

$$(1.1) \qquad \text{If} \quad a_n = \left(1 + \frac{x}{n}\right)^n, \quad \text{then} \quad \lim_{n \to \infty} a_n = e^x.$$

- Please use the LaTeX commands \label, \eqref or \ref, and \cite, to produce the following sentence:

  The formula (1.1) is explained in the book [1].

2. About the author

(1) Which program and year of study are you in?
(2) Please list the previous math courses you have taken, as well as the other courses you're currently taking. Which course(s) were your favourites?
(3) Why did you pick MAT392?

3. Zeno's paradox

In less than one page, describe Zeno's paradox of the Tortoise and Achilles, and explain how to use the modern notion of a limit to resolve this paradox.

References

[1] Tom M. Apostol, *Mathematical analysis*, Addison-Wesley Pub. Co., 1974.

Email address: `Your.email.address`