

L^AT_EX EXERCISE 2, 18.100C

Due on the Stellar website by 11:59P.M. on **Thursday**, March 31;
L^AT_EX source and compiled document (in .pdf format) required.

Exercise 1. Create a simple `beamer` presentation consisting of two slides. The first should include a title of your choosing and all the usual author/institution/date information. The second slide should consist of a heading and then a graphic made in `ipe` illustrating Corollary 3.9.9 from Professor Barwick's course notes in the special case in which X is a compact subset of the real line.¹ Your graphic **must** include L^AT_EX'd labels.

For reference, here is the statement of 3.9.9:

Suppose X a compact space, and suppose $f : X \rightarrow \mathbf{R}$ a continuous function. Then f attains both a maximum and a minimum value; that is, there exist elements $a, b \in X$ such that for any $x \in X$, one has $f(a) \leq f(x) \leq f(b)$.

Exercise 2. During April 1's recitation, we will hold a question discussion in preparation for the second exam. A link to a Google Document is available on Stellar under the assignment "Two Precise Questions 4/1." Please add two precise questions to the end of the document and sign each question in the format [K.O.], substituting your first initial for K and last initial for O.

Of course, Google Docs does not support L^AT_EX. Mathematicians frequently communicate in email with semi-T_EX'd text. So write your questions as if they were going to be processed by L^AT_EX, but drop things like dollar signs that would clutter the text.

Please access the document on the morning of April 1 to review your peers' questions.

Date: March 18, 2011.

¹If you feel like having more fun with `ipe` or other L^AT_EX graphics utilities, you are free to attempt a more ambitious graphic.