Math 330 Section 2 - Fall 2018 - Homework 14

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Update November 6, 2018

Assignment 1: changed reference from prop.10.11 to thm 10.11

Status - Reading Assignments:

Here is the status of the reading assignments you were asked to complete by this date.

B/G (Beck/Geoghegan) Textbook:
Preface, ch.1 – ch.6, ch.7.1 (only prop.7.9 – prop.7.12), ch.8 – ch.10,
ch.11 until before cor.11.23, ch.12 – ch.13.

MF lecture notes:
ch.1 – ch.3, ch.5 – ch.12.2.2 (skip ch.6.3 and ch.8.3).
ch.19.7.2 (The Addition Algorithm for Two Nonnegative Numbers (Base 10))
Any "Addenda" subchapters: those will be added to without notice.

B/K lecture notes (optional):
ch.1.1 (Introduction to sets)
ch.1.2 (Introduction to Functions) but skip ch.1.2.4: Floor and Ceiling Functions

Other:
- Stewart Calculus 8ed - ch.1.7: "The Precise Definition of a Limit". If you have a newer or older edition then you may have to search through the table of contents and/or consult the index.
- Paul Dawkins' linear algebra lecture notes: As indicated at the bottom of the course materials page

New reading assignments:

Reading assignment 1 - due Monday, November 5:

a. Review MF ch.10.3 on convergence and continuity.
b. Read carefully MF ch.13.1.1 – 13.1.5. Draw plenty of pictures!

Reading assignment 2 - due: Wednesday, November 7:

a. Read carefully MF ch.13.1.6 – 13.1.9. Draw plenty of pictures!

Reading assignment 3 - due Friday, November 9:

a. Read carefully MF ch.13.1.10 and ch.13.2.1 – 13.2.2.

Written assignment 1: Prove MF thm.10.11: Let $(x_n)_n$ be a convergent sequence of real numbers. Then its limit is uniquely determined.

Written assignment 2: MF exercise 10.10: Let $x_n := (-1)^n$ for $n \in \mathbb{N}$. Prove that $\liminf_n x_n = -1$ and $\limsup_n x_n = 1$ by working with the tailsets of that sequence. You are not allowed to use anything after def.10.15. **Hint:** What is α_n and β_n?