Introduction to Analysis I (Fall 2025): Homework 5

- LSIRA stands for the textbook (Lindstrøm: Spaces An Introduction to Real Analysis).

- You **must email your submission as a PDF file** to kbala@wsu.edu. You are welcome to write answers by hand, and scan the writings.

- **If you use LATEX to typeset your homework submission, you will get 5 extra points!** You could use a LATEX locally on your computer or use a web service, e.g., Overleaf. Sorry, but using MS Word does not count here!

- Your file name should identify you in the following manner. If you are Leopold Scotch Butters, you should name your submission LeopoldButters_Hw5.pdf (and **NOT** Leopold_Butters* or **Leo**Butters*, or Hw5_LeopoldButters..., or ...). You are welcome to add anything more to your filename *after* these terms, e.g., LeopoldButters_Hw5_Math401.pdf. Please avoid white spaces in the file name :-).

- **Begin the SUBJECT of your email submission with the same `FirstnameLastname`, e.g., "LeopoldButters Hw5 submission".**

- The total points (given in parentheses) add up to 100.

- **This homework is due in my email inbox by 11:59 PM on Thursday, September 25**.

1. (25)   LSIRA Section 2.2 Problem 5 (Page 36).
   Also, is this sequence Cauchy? Justify your response.

2. (30)   LSIRA Section 2.2 Problem 7 (Page 36).

3. (45)   LSIRA Section 2.2 Problem 9 (Pages 36–37).