Homework 1-01

due June 25 in class

Suggested Exercise

Suggested exercise:

• Section 10.1, #1, 2, 11, 12, 16, 27, 31, 43

• Section 10.2, #3, 4, 9, 10, 31 − 34, 40, 42

Turn in:

Problem 1. Find the limit of the sequence

\[ a_n = \frac{(\ln n)^2}{n} \, . \]

Problem 2. Given an example of divergent sequences \((a_n)\) and \((b_n)\) such that the sequence \((a_n + b_n)\) converges.

Problem 3. Determine if the following series converges or diverges.

\[ \sum_{n=1}^{\infty} \frac{n}{\sqrt{n^2 + 1}} \, . \]