MATH 3100 – Homework #5
posted October 7, 2024; due October 16, 2024

There you stand, lost in the infinite series of the sea. . . – Herman Melville

Section and exercise numbers correspond to the online notes. Assignments are expected to be **neat** and **stapled**. **Illegible work may not be marked.**

Required problems

1. §2.1: 9

   The definition of summable is that the sequence $\{a_n\}$ is summable when the series $\sum_{n=1}^{\infty} a_n$ converges.

2. §2.1: 12

3. §2.1: 13

4. §2.1: 14

5. §2.1: 15

6. §2.2: 1(a,c,d,f,h,j,l)

   Hint: None of these parts require the integral test!

7. §2.2: 2

   Hint: First prove that $a_n^2 \leq a_n$ eventually. Then finish the problem using the Eventual Comparison Test.

8. §2.2: 3

9. §2.3: 9

Recommended problems (NOT to turn in)

§2.1: 1, 2, 3, 4, 5, 6, 8, 10
§2.2: 1(b,e,g,i,k)