

Study guide for quiz 01

Quiz problems include both the lecture contents and homework problems.

1. Section 10.1:

Study the definition of convergence of a sequence, including the cases of the limit being $\pm\infty$.

Sample problems: lecture 02, page 2-3. Section 10.1, problem 125.

2. Section 10.1:

Review the techniques of finding the limit of a sequence including Sandwich Theorem for sequences, L'Hôpital's Rule, Theorem 2-4 and related examples.

Sample problems: The examples in Theorem 5. Also memorize the results for future applications.

3. Section 10.1: (Parts to skip)

Skip the "Recursive Definition" part.

Skip the "Bounded Monotone Sequences" part. We will come back to it later.

4. Section 10.2:

Study the definition of convergence of a series.

Study the n -th term test on its application (section 10.2, problem 31, 33, 41) and its proof.

Review conditions on convergence/divergence of a geometric series (section 10.2, problem 71, 78).

Review the technique of telescoping sum (lecture 02, page 14; section 10.2, problem 43, 65).