Calculus II, Spring 2023 (http://www.math.nthu.edu.tw/~wangwc/) Thomas' Calculus Early Transcendentals 13ed

Study guide for quiz 02

Quiz problems include both the lecture contents and homework problems.

- 1. Section 10.3: Study the statement and proof of the integral test (Theorem 9). Practice with examples. In particular, derive and memorize the convergence/divergence of a *p*-series.
- 2. Section 10.4: Study The Comparison Test and The Limit Comparison Test. Focus on how to find a suitable target series to compare with. In almost all cases, the target series can be found from the geometric series, the *p*-series or series of the form $\sum_{i=1}^{\infty} f(n)$

where $\int_{1}^{\infty} f(x) dx$ is easy to compute.