Real Analysis

Homework 11

Deadline: 13 December 2023

Choose two of the four exercise below, and hand in you homework in Room 554 before 5 P.M. December 13.

Exercise 1

Let $\{f_k\}$ be a sequence of measurable functions on E. Show that Σf_k converge absolutely a.e. in E if $\Sigma \int_E |f_k| < \infty$

[Zygmund p86 exercise 13]

Exercise 2

If $f \geq 0$ show that $f \in L^p$ if and only if $\Sigma_{k=-\infty}^{+\infty} 2^{kp}\omega(2^k) < +\infty$

[Zygmund p86 exercise 18]