Real Analysis I

Problems 1

Joseph K. Miller

Last updated: June 22, 2024

Exercise 1 (Sanity Check). *Prove that the Lebesgue measure of $[0,1]^d \subset \mathbb{R}^d$ is 1.*

Exercise 2 (Measure Tools). *Prove Theorem 3 in the lecture notes.*

Exercise 3 (Borel-Cantelli). *State and prove the Borel-Cantelli lemma.*