

THE CHINESE UNIVERSITY OF HONG KONG

Department of Mathematics

MATH5011 (Fall 2014)

Real Analysis I

Announcement on 24 /11

1. The outer regularity of the Hausdorff measure. The definition of a regular Borel measure should follow the one in [EG]. Outer regularity means for each set A there is a Borel set B containing A with the same measure. B is not nec open. Please refer to theorem 1 in chapter 2 of [EG]. I will revise the notes later.
2. In problem 9(a), Ex 8, add the assumption $\|g\|_{1/q}$ is finite.
3. In problem 13, Ex 9, the first several sentences should be: Suppose on the contrary that $\exists \epsilon_0 > 0$ such that $\forall n \in \mathbb{N}, \exists E_n \in \mathfrak{M}$ with $\mu(E_n) < 2^{-n}$ such that $\lambda(E_n) \geq \epsilon_0$. Put $E = \bigcap_{n \in \mathbb{N}} \bigcup_{k \geq n} E_k$. etc. There are a couple of typos.