

University of Colorado
Department of Mathematics

2018/19 Semester 1

Math 6310 Real Analysis 1

Assignment 2

Due Wednesday September 26, 2018

1. Let $\{E_i\}_{i=1}^n$ be a finite sequence of measurable subsets of the measure space (X, \mathcal{M}, μ) , where $\mu(X) = 1$. If each point of X belongs to at least three of these sets, prove that at least one of the sets $\{E_i\}_{i=1}^n$ has measure $\geq \frac{3}{n}$.
2. Do exercises 12, 14, 15 parts a, b, on p. 27 and 17, 18, 19, 22 part a and 23 part a on p. 32 of the Folland textbook.