PMAT 501/601 L01

Winter 2009   Assignment 4

Questions taken from the text by D. Cohn will be specified by page and number. Due March 25 , 2009.

1. Use a cardinality argument to show, in just a couple of lines, that there are Lebesgue measurable sets that are not Borel sets, indeed that such a set exists which is a subset of the Cantor perfect set. You may assume that $|\mathcal{B}(\mathbb{R})| = \mathbf{c}$, the proof of which was outlined in the lectures.

2. p.34, 1

3. p.34, 2

4. p.69, 1

5. p.69. 2