

Homework 13*

Starred exercises to be turned in next Thursday

Announcement: The exam has been rescheduled to 3 May (morning). Its place will be announced on this website. You can either participate in the full exam or in part B.

Exercise 13-1* Prove that the first formula on p. 116 (i.e., Jensen's inequality) follows from the last formula on p. 115. *Hint:* Prove first that for g as in Theorem 6.1.1 the set $\{(\alpha, y) \in \mathbb{R} \times \mathbb{R}^N : \alpha \leq g(y)\}$ is closed and convex.

Exercise 13-2* Prove parts (iv)-(v) of Theorem 6.2.2. Prove also parts (i)-(ii) for $p = \infty$.

Exercise 13-3 = Exercise 6.1.6

Exercise 13-3 = Exercise 6.2.20

Exercise 13-3 = Exercise 6.2.22

*Re: Measure and Integration, 15 April, 2002