

HOMEWORK #4

Due Friday, October 24, 2008 (5:00 p.m.)

Midterm Exam: Thursday, October 30, 4:00–5:50 p.m. (open book, open notes)

Problems:

1. Let A , B , and C be events in the fields \mathcal{F}_1 , \mathcal{F}_2 , and \mathcal{F}_3 , respectively, all for the same discrete sample space Ω . For $\mathcal{F}_3 \subset \mathcal{F}_2 \subset \mathcal{F}_1$, show that

$$E[E[X|C]|B] = E[X|C] \quad (1)$$

2. Chapter 4: Problem 4.36
3. Chapter 4: Problem 4.47
4. Chapter 5: Problem 5.19
5. Chapter 6: Problem 6.6
6. Chapter 6: Problem 6.14