

HOMEWORK #3

Due Friday, October 26, 2007 (5:00 p.m.)

Reading: Read Appendix D and Chapters 5 and 6

Problems:

1. Problem 4.14
2. Problem 4.18
3. Problem 4.21
4. Problem 4.36
5. Problem 5.5
6. Problem 5.19
7. 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

$$E[E[X|C]|B] = E[X|C] \tag{1}$$