

Math515/Stat540
Additional problems for Exam 1

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Figueroa-Lopez

Instructions:

- *The following problems are meant as further practice. Some of these problems are challenging and the actual problems of the exam are not necessarily similar (maybe, we will test a few subparts of one or two problems below).*
- *Before trying these problems, you must review thoroughly all the problems in Homeworks 1 to 3, and the class notes (including proofs).*
- *The exam will cover Chap. 1, 2, and section 3.1 (including, Donsker's invariance theorem).*
- *Some of the problems below can be found in the book of Shreve, Stochastic calculus for finance I, Discrete-time Models. This book is on reserve in the Math Library.*

1. (Shreve Vol I): Exercises 1.3, 1.8 (i)-(ii), 1.9 (iii), 2.9, 2.10 (i)-(ii), 4.6, 4.7.
2. Take a look at the exercises of Chapter 11 in Hull's book (it also talk about the CRR calibration procedure in section 11.7).