

**MATH 154 - PROBABILITY THEORY, SPRING 2018**  
**ASSIGNMENT 5**

**Due Wednesday, February 28 at the beginning of class.** Make sure to include your full name *and the list of your collaborators* (if any) with your assignment. You may discuss problems with others, but you may *not* keep a written record of your discussions. Please refer to the syllabus for details.

With regards to answering these problems, imagine that you are writing an answer to teach someone else in the class how to do the problem. In particular, you must give a complete outline for how you arrived at your answer. It is not sufficient to simply state a number or formula without providing the steps and reasoning that you used to produce the answer.

- (1) Do problems 2 and 4 on p. 75 of Grimmett-Stirzaker.
- (2) Do problems 1,2 and 3 from the sections 3.10 problems on top of p. 83 of Grimmett-Stirzaker.
- (3) Do problem 10 on p. 84 of Grimmett-Stirzaker.
- (4) Do problems 23 and 26 on p. 86 of Grimmett-Stirzaker.
- (5) Describe in a paragraph two phenomena, in either in the physical sciences, life sciences, or social sciences (including economics) that can be modeled (roughly) by a random walk. You should supply a reference to each.