

Introduction to Probability, Fall 2013

Math 30530 Section 01

Homework 7 — due in class Wednesday, November 6

General information

At the top of the first page, write your name, the course number and the assignment number. If you use more than one page, you should **staple all your pages together**. The grader reserves the right to leave ungraded any assignment that is disorganized, untidy or incoherent.

Reading

- Sections 2.7, 3.1 and 3.2

Problems

1. Chapter 2, problem 38
2. Chapter 2, problem 39
3. Chapter 2, problem 40
4. Chapter 2, problem 41 (a, b, c only)
5. By writing the Negative Binomial random variable with parameters p (success probability on each trial) and m (number of successes needed until experiment stops) as a sum of independent geometric random variables, calculate the mean and variance (in terms of p and m).
6. Chapter 3, problem 1
7. Chapter 3, problem 2
8. Chapter 3, problem 5
9. Chapter 3, problem 6
10. Chapter 3, problem 7
11. Chapter 3, problem 8