

## Exam 03: Study Guide

This exam will be of a somewhat different format compared to the first two exams. Many of the problems on the worksheets in this unit are focused on fairly specific derivations of the main characteristics of five named probability distributions: Bernoulli, binomial, geometric, negative binomial, and Poisson. These are important derivations to see and I really believe that working through them is important for understanding the material. However, these do not make for great exam questions. It is not easy to modify the questions and still leave them possible to finish, so you'll already know the answers. If I grade your work rather than just the solutions, then you'd be forced to memorize some long calculations with one-off esoteric tricks. That is not a great use of anyone's time.

My solution to this problem will be seen in Worksheet 13. There, I have formulated several types of probability problems based on the material in this section. To do them you will have to demonstrate your knowledge of the core concepts (pmf, cdf, expected value, moments, variance, and the mgf) as well as understand the ideas behind the five probability distributions we have studied. None of these involve derivations that are mathematically complex and they can all be tweaked in a way that requires you to understand their solutions in order to complete their modified version. This also has the benefit that we get a nice review day after fall break.

For this and every subsequent exam, you will have access to the table of distributions found at the top of the class website. You can keep the one I distribute during the exam and should bring it to future class meetings.