

# Probability (MATH 4733 - 01) Fall 2011

## Homework 7

Due: Wed. Oct. 19, start of class

**Instructions:** Please read the homework policies and guidelines posted on the course webpage. Make sure to write your name and course number in the top right corner of your solution set, as well as the assignment number on top. Please staple your homework. Sections and exercises refer to the exercises in the required course text.

**You may not use a calculator** or computer except for basic arithmetic operations ( $+$ ,  $-$ ,  $\times$ ,  $\div$ ) or to give a decimal approximation to an exact answer you have (e.g.,  $e^{-2} \approx 0.135$ ). In particular, you may not use a calculator/computer for integration.

### Reading

Section 3.5

### Conceptual Questions

1. For a discrete random variable, what does the pdf tell you? Does the pdf mean the same thing for a continuous random variable? What about for cdf's?
2. What does expected value mean? Can you give an explanation that is the same for both the discrete and continuous case?

### Written Assignment

Total: 100 points. Each problem is worth 10 points unless otherwise noted.

**Section 3.4:** 8 (5 pts), 9 (5 pts), 10 (5 pts), 14 (5 pts), 17

**Section 3.5:** 1 (5 pts), 2 [ignore the number (183)], 4, 8, 9 (5 pts), 11, 12, 23