

## MA381 Introduction to Probability, HW 5

**Instructions:** This homework will be collected at the beginning of class the first Tuesday after break. Selected problems will be graded in depth; remaining problems will be awarded completion credit.

**0:** Be sure to read chapter 4, sections 4.1-4.4.

**1:** Put your campus mail address on your hw. (2 pts.)

**2:** Do problem 1, pp. 150-152

**3:** Do problem 5, pp. 150-152

**4:** Do problem 8, pp. 150-152

**5:** Do problem 4, pp. 157-159

**6:** Do problem 9, pp. 157-159.

**7:** Let  $Y$  be the number of tosses of a fair coin until you get heads. For example, if you get heads on the 1st toss  $Y = 1$ , if you get tails on the first toss and heads on the second  $Y = 2$ , and so on. Determine  $Y$ 's PMF,  $p_Y(y)$ .

**8:** Do problem 2, pp. 173-174. If it is financially preferable to park illegally, determine the amount of fine needed to make parking in the garage and parking illegally financially equivalent.

**9:** Do problem 8, pp. 173-174.

**10:** Do problem 9, pp. 173-174.