# CS 333202: Probability and Statistics
# HW5 Part I

1. (a) Two athletic teams play a series of games; the first team to win 4 games is declared the overall winner. Suppose that one of the teams is stronger than the other and wins each game with probability 0.6, independent of the outcomes of the other games. Find the probability that the stronger team wins the series in exactly $i$ games.

   (b) Suppose in (a) that the two teams are evenly matched and each has probability $\frac{1}{2}$ of winning each game. Find the expected number of games played.

2. The expected number of typographical errors on a page of a certain magazine is 0.2. What is the probability that the next page you read contains (a) 0 and (b) 2 or more typographical errors? Explain your reasoning!

3. People enter a gambling casino at a rate of 1 for every 2 minute.

   (a) What is the probability that no one enters between 12:00 and 12:05?

   (b) What is the probability that at least 4 people enter the casion during that time?