## Math 477, Worksheet for lecture 13

## Name:

## Net ID:

1. Suppose you are given a stick, 1 foot long. A random point is chosen on the stick and the stick is then broken at that point, resulting in two pieces. What is the probability that the longer piece is at least 3 times longer than the shorter piece?
2. If a coin is flipped 65 times, approximate the probability that it comes up heads at least 45 times?
3. Suppose that on average, a certain region is hit by 3 hurricanes per year (following a Poisson distribution). What is the probability that there are no hurricanes in a given year? What is the conditional probability that the region has a hurricane in the second year, assuming it didn't have one in the first year?
