CS 333202: Probability and Statistics
HW6 Part I

1. (a) In the Banach matchbox problem, HW5 part II 3, find the probability that when the first matchbox is emptied (not found empty) there are exactly m matches in the other box.

   (b) In the Banach matchbox problem, HW5 part II 3, find the probability that the box which is emptied first is not the one that is first found empty.

2. Balls are randomly withdrawn, one at a time without replacement, from an urn that initially has N white and M black balls. Find the probability that n white balls are drawn before m black balls, $n \leq N, m \leq M$.