

Math 477, Worksheet for lecture 19

Name: _____

Net ID: _____

1. A coin is flipped n times. We say a changover occurs whenever a flip gives a different result than the flip just prior. Let X be the number of changovers which occur.

(a) Find $E[X]$.

(b) Find $P(X = 1)$.

2. Suppose that 20 people in a room are randomly assigned numbers between 1 and 300 so that no two people are assigned the same number. Assume that no one in the room is more than 300 years old. Let X be the number of people who are assigned a number which matches their age.

(a) Find $E[X]$

(b) Can we compute $P(X = 0)$ given the information we have? Why or why not?