

Math 477, Lecture 8 class work

Name: \_\_\_\_\_

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1. If three random numbers are chosen between 1 and 10, with each number being equally likely, let  $X$  denote the maximum value chosen. Write a formula for  $P(X = a)$  for  $a = 1, \dots, 10$ .
2. Let  $S$  be the sample space consisting of the result of sequences of 10 coin tosses, and let  $X$  denote the number of heads in a given sequence.
  - (a) Find  $P(X = 4)$ .
  - (b) Find  $P(X \leq 5)$ .
3. Suppose we have 3 baskets, the first containing 6 white and 4 blue balls, the second containing 1 white and 9 blue balls, and the third containing 3 white and 7 blue balls. If a ball is selected from one of the baskets, (each of the balls being equally likely), and the ball is white, what is the probability that it came from the third basket?