

name : _____

section : 105

GSI : Charles Wang

(2 pts) Circle True or False. (+1 for correct, 0 for blank, -1 for incorrect)

1. (True False) Every pmf is also a pdf, but not every pdf is necessarily a pmf.
2. (True False) The Coin Flip distribution is an example of a Binomial distribution.

(10 pts) For the following, you must **justify** your answer to receive credit. (Showing your work counts as justification.)

3. (a) (2pts) There are two parameters in the definition of a binomial distribution: n and p . Explain the meaning of these parameters (i.e. what they represent).

(b) (4pts) What is the outcome space for a random variable, X , following a binomial distribution with parameters n and p ?

(c) (4pts) Let X be a random variable following a binomial distribution with parameters $n = 3$ and $p = \frac{1}{2}$. Compute and draw the PMF for X .