

Math 10A with Professor Stankova

Quiz 13; Monday, 11/20/2017

Section #106; Time: 10 AM

GSI name: Roy Zhao

Name: _____

Circle True or False or leave blank. (1 point for correct answer, -1 for incorrect answer, 0 if left blank)

1. True False The probability function $P : \Omega \rightarrow \mathbb{R}$ gives the probability of any single outcome occurring.
2. True False Let X, Y be random variables such that $X + Y = 1$. Then X and Y can be independent variables.

Show your work and justify your answers. Please circle or box your final answer.

3. (10 points) I have a loaded coin such that head appears three times as likely as tails. Suppose I get paid 1 dollar for every head that I flip. I flip the coin once and want to know how much I get paid.

(a) (4 points) Describe what the triplet (Ω, P, X) is in this scenario.

(b) (5 points) Graph any of the following that apply (be sure to clearly denote what you are drawing): PDF, PMF, CDF

(c) (1 point) Calculate the payout and the standard error of this game.