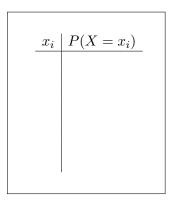# Finite Mathematics (Math 10120), Spring 2020
Quiz 5 Monday, April 6, 2020

1. Bruno has a box with 4 red balls and 6 blue ones. He randomly draws two balls (without replacement). Let X be the random variable that counts the number of red balls that he draws. Find the probability distribution for this random variable. For your answers I would like actual fractions, not using combination notion. (E.g. instead of $\frac{1}{C(7,2)}$ I'd like you to put $\frac{1}{21}$. You don't have to write a decimal equivalent, but you can if you want to.)

x_i	$P(X = x_i)$

2. In some carnival game there are different amounts of money you can win, with the following probabilities:

x_i	p_i
\$0	2/3
\$6	1/6
\$24	1/8
\$240	1/24

If they want this to be a fair game, how much should they charge someone to play the game? For partial credit make sure you explain your answer.