

Math 477 “QUIZ” for Lecture 6

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. The probability mass function of random variable X is given by $c/3^i$, $i = 0, 1, 2, \dots$, where c is some positive value. Find (i) $P\{X = 0\}$, (ii) $P\{X < 3\}$, (iii) $P\{X > 5\}$.

2. Let X be the winnings of a gambler and assume that

$$P\{X = -2\} = 0.15 \quad , \quad P\{X = -1\} = 0.3 \quad , \quad P\{X = 1\} = 0.35 \quad , \quad P\{X = 2\} = 0.2 \quad ,$$

(a) Compute the conditional probability that gambler wins i , for $i = 1, 2$, given that he wins a positive amount.

(b) Find $E[X]$, his expected winning.