

Math 350 Probability – Quiz 3 – Fall 2007

Name: _____

Instructions: **Answer each question completely and show all work.**

1. Suppose three cards are drawn from a deck (without replacement). Let X be the number of jacks drawn.

(a) Find the probability mass function for X .

(b) Find the $E(X)$.

(c) Suppose you pay \$4 and you are then given the opportunity to draw 3 cards and you get \$13 for each jack you draw. What is your expected winnings (or losses) in this game?

- (d) Suppose you play the game in part (c) 2000 times. What is the expected number of times that you will win money.