

Lecture 11

February 9, 2015

1. Try 3.4.42. Hint for part (b): We learn the formula

$$V(X) = \sum x^2 p(x) - \mu^2.$$

Do you recognize that it is the same as $E(X^2) - \mu^2$?

2. We roll a fair die $n = 6$ times and let X be the number of times we have the number 1.
 - (a) Form a table with the list of possible values for X and find the corresponding probability $P(X)$
 - (b) Use the table in part (a) to find the mean $E(X)$.
 - (c) Use the table in part (a) to find the variance $V(X)$.