Math 488P/588 Homework 15

Written assignments due: Monday, 5/4/2015

NAME: _____

Reading Assignments - current Status:

Bluman:
   skimmed chapter 1
   Ch.2: sections 2.1, 2.2, 2.4
   Ch.3: sections 3.1, 3.2, 3.3 (the part about standard scores)
   all of Ch.4, Ch.5, Ch.6, Ch.7, Ch.8
   Ch.9.1, 9.3
   all of Ch.10 - Regression

Hossain/Makhnin:
   Chapters 1 - 3.5
   Chapters 4.1 - 4.3 and 4.6
   Chapter 5
   Chapter 6.2, 6.4 (CLT)
   Chapter 8
   Chapter 9 - Regression

Reading Assignments:

Hossain/Makhnin:
Due: Thursday, 4/30/2015
   H/M 3.7: Poisson Distribution
   H/M 4.4: Exponential distribution
   H/M 4.5.1: Poisson process, disregarding the link with the Gamma function

Bluman:
Due: Monday, 5/4/2015
   Ch.11 - ANOVA

Problems on categorical data analysis

Assignment 1:

Suppose that we have a random sample of 600 marbles from a big container with the fol-

lowing distribution of color:

212 of the marbles are blue. 147 of the marbles are orange. 103 of the marbles are green. 50 of the marbles are red. 46 of the marbles are yellow. 42 of the marbles are brown.

A claim was made that the distribution of color is uniform across all marbles in the container. Does the sample support that hypothesis?

Assignment 2:

A public opinion poll surveyed a simple random sample of 1000 voters. Respondents were classified by gender (male or female) and by voting preference (Republican, Democrat, or Independent). Results are shown in the contingency table below.

	Republican	Democrat	Independent	Row total
Male:	200	150	50	400
Female:	250	300	50	600
Col Total:	450	450	100	1000

Is there a gender gap? Do the men's voting preferences differ significantly from the women's preferences? Use a 0.05 level of significance.