

STAT101 Review for Exam 1

I. Read Chapter 1-9. 

II. Concepts:

1. Describe categorical data: 1 variable: use bar chart or pie chart.
2. Describe categorical data: 2 variables: use Contingency table (2 way table). Marginal distribution, conditional distribution
3. Describe numerical data: 1 variable: use histogram, or boxplot.
4. Mean, standard deviation, 5 number summary, outlier, unimodal (bimodal, multimodal, uniform) distributions, symmetry, skewed to the right (left).
5. Normal model, draw a graph, symmetry. 4 types of calculations. 68-95-99.7-rule
6. Linear Regression: From a scatter plot, tell the direction (positive or negative). Strong or weak, linear or not. The meanings of r (can you tell from r whether two variables are quadratically related?), r^2 , y -intercept, slope. Residual (overestimate, underestimate, curved residual plot), Lurking variable, outlier. Know how the means of x , y , the standard deviations of x , y , the correlation coefficient r , the slope of the regression line, and the y -intercept of the regression line are related.

Exam 1 is Friday, Feb. 17, 2012. 11-11:50 am in our classroom. Calculator is OK. Closed book and notes.