**Quiz 4 Study Guide**

**Chapter 14**

* Be able to understand and interpret a regression equation. What is , what is .
* Be able to evaluate whether a regression equation fits a set of data (coefficient of determination - r2)
  + Does a high r2 show causation?
* Be able to understand and interpret the assumptions of a regression equation
  + How do you diagnose when assumptions aren’t being met?
  + How might we see that the assumption of linearity is not being met? – Residuals vs. Fitted Values
  + How might we see that the assumption of normality is not being met? – Histogram of Residuals, normal probability plot
  + How might we see that the assumptions of homoscedasticity (equal variance) are not being met? – standardized residuals vs. Fitted Values
* Understand how to test for a significant relationship.
* Be able to develop a confidence interval estimate of y for a specific value of x.
* Understand how the least squared method of coefficient estimation works.
  + Be able to calculate
  + Correlation coefficient.
  + Coefficient of determination
  + Point of estimate