

## STA 471 REGRESSION ANALYSIS

### Homework #2 (Due Thursday, September 21)

1. For the data given in problem **F** on page 99,
  - a) Test to determine whether there is a linear relationship between  $X$  and  $Y$  at  $\alpha = 0.05$ . Be sure to state the null and alternative hypotheses, test statistic and its observed value, and conclusion.
  - b) Calculate a 95% confidence interval for  $\beta_1$  and interpret the confidence interval. What is your conclusion based on the confidence interval?

**Note:** Do not use any statistical computer package for this homework.