

Homework #2

Due date 10/01/2018

NOTE: You may form a study group to work on homework problems. However, each student must submit solutions to the homework problems in your own words, demonstrating your own understanding of the problems.

1. Given the LungCap data, using only the first column (LungCap) and the second column (Age), assume that errors are independent and normally distributed, $\varepsilon_i \sim N(0, \sigma^2)$.
 - (a) Compute the 90% confidence limits for β_1 .
 - (b) Compute the 90% confidence limits for σ^2 .
 - (c) Perform a size $\alpha=0.10$ test of $H_0: \beta_1 = 1$ versus $H_a: \beta_1 \neq 1$.
2. In your text (A second Course in Statistics, Regression Analysis, 7th edition, by Mendenhall and Sincich), do the following problems:
 - (a) Section 3.8, page 127, exercise #3.44
 - (b) Section 3.9, page 134, exercise #3.54

Note: Data for problem 2 posted on beachboard.