Due November 18th 5 PM PST

Content: This homework includes problems from Sections 14.3, 14.6 and 11.2 of Larsen and Marx 6th edition.

• Problem 1 Larsen and Marx page 650 Problem 14.3.1

• Problem 2 Larsen and Marx page 668 Problem 14.6.2

• Problem 3 Larsen and Marx page 528 Problem 11.2.1 (superimpose the obtained least squares line on your scatterplot of the raw data \((x, y)\) and clearly show all your calculations)

• Problem 4 Larsen and Marx page 530 Problem 11.2.8

• Problem 5

Consider the following hypothesis for a Wilcoxon signed rank test.

\[ H_0 : m = 6 \text{ versus } H_1 : m \neq 6 \]

where \( m \) is the mean of the underlying population.
a) Determine the p-value of the Wilcoxon signed rank test using the data: 
\(x_1 = 15, x_2 = 7, x_3 = 3, x_4 = 10, x_5 = 13\). Show all your calculations clearly.

b) Use the Wilcoxon test in R to generate the p-value and compare with the result obtained in part (a).