STAT525 HOMEWORK#6

1. KNNL Problem 9.13 - For part a) generate boxplots or histograms instead of dot plots.
2. KNNL Problem 9.14 - first-order terms mean X_1, X_2 and X_3, second-order terms mean X_i^2, $X_i * X_j$ for all possible i, j.
3. KNNL Problem 9.23.
4. KNNL Problem 9.24.
5. KNNL Problem 10.20. – For part b), please note that $E[Z_{(i)}] \approx \mu + \sigma r_{\alpha_i}$, where $Z_{(i)}$ is the i-th smallest value among $\{Z_1, Z_2, \cdots, Z_n\}$ with each $Z_i \overset{iid}{\sim} N(\mu, \sigma^2)$, $\alpha_i = \frac{i-3/8}{n+1/4}$, and r_{α_i} is the $\alpha_i \times 100\%$ percentile of $N(0, 1)$. You can also use `PROC RANK` to output the expected values.
6. KNNL Problem 10.24.
7. KNNL Problem 10.26.