

Stat 205 Homework 3 (Due 16 October, **Monday**)

Instructor: Chao Cai

Total points: 50 pts

(Email submissions will not be accepted)

1. (9 pts) Textbook problem section 4.4, page 142 Problem 4.4.2.
2. (11 pts) Textbook problem section 5.2, page 158 Problem 5.2.4. (Give the answers of both parts using R.)
3. (7 pts) Textbook problem section 6.2, page 182 Problem 6.2.3 (May need R codes used in HW2 for some parts) .
4. (13 pts) Textbook problem section 6.3, page 191 Problem 6.3.3. (Make a QQ-Plot to verify the Normality assumption, Use R).
5. (10 pts) Consider the data given in problem section 6.7, page 216 Problem 6.7.11. Using R answer the followings:
 - i) Make QQ-Plots to verify Normality
 - ii) Construct a 90% confidence interval for comparing mean heart rate difference in caffeine and decaf group after 10 minutes of taking coffee.
 - iii) State your conclusion about the effect of caffeine on heart rate based on part ii).