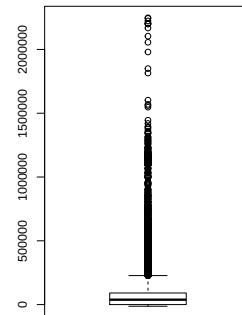


MA117 - WORKSHEET 2

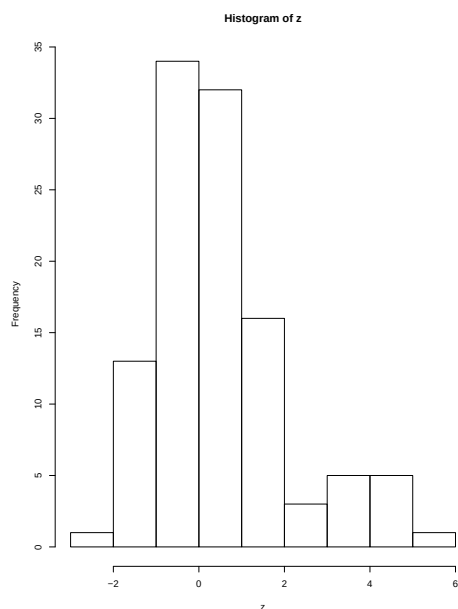
DESCRIPTIVE STATISTICS

Week 1, Wednesday

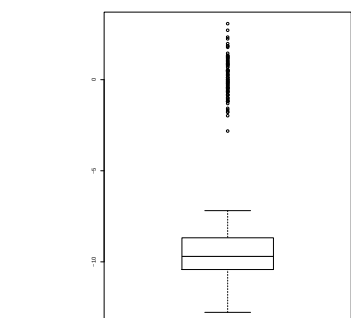
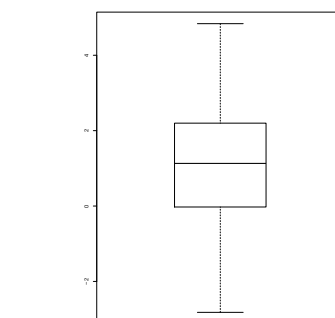
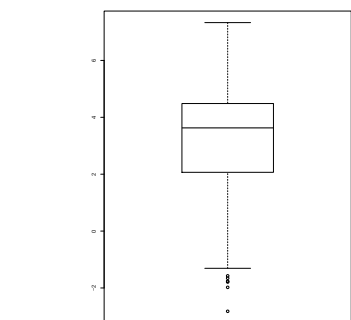
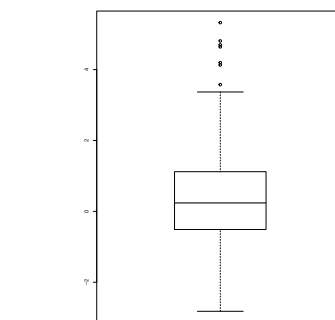
Problem 1. The US Census Bureau provides data about the 2018 household income for a sample of 94633 households. This data is depicted to the right as a box plot. Is the distribution skewed? If so, is it right or left skewed?



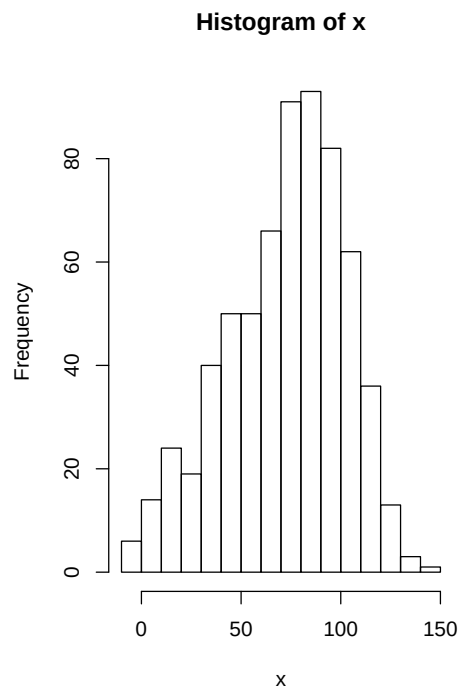
Problem 2. The same data set by the US Census Bureau also tells us whether each household is “metropolitan” or “non-metropolitan.” If you wanted to compare the distribution of annual household income based on whether or not the household is “metropolitan,” what kind of plot might you use?



Problem 3. Which of the following box plots does the histogram on the left correspond to? Explain your answer.



Problem 4. The histogram of a numerical variable x is depicted to the right. Is the mean higher than the median of x , or is it the other way around?



Problem 5. You are interested in find out how much CC students sleep per night. You acquire a list of all CC students from the registrar and use it to randomly sample 100 CC students. You then have each of those students record how long they sleep over the course of a block. Afterwards, you look at the data and find that, on average, they slept 6.1 hours per night. Is the number 6.1 a statistic or a parameter?

Problem 6. Facebook data indicates that 50% of Facebook users have 100 or more friends, and that the average friend count of users is 190. What can you conclude about the skew of the distribution of the number of Facebook friends people have?