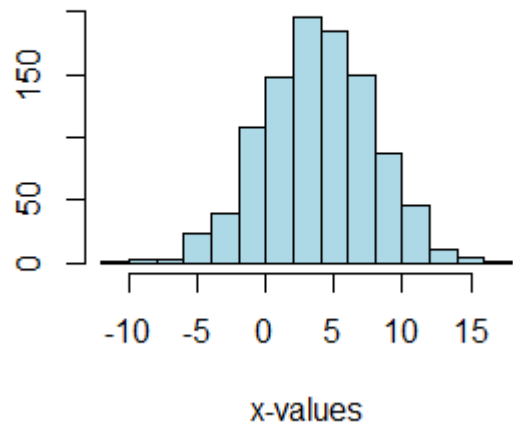
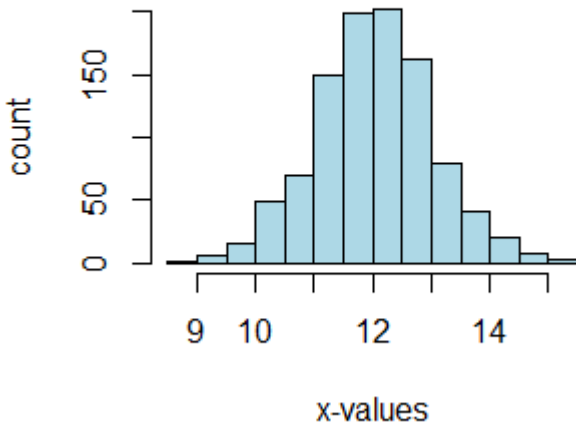
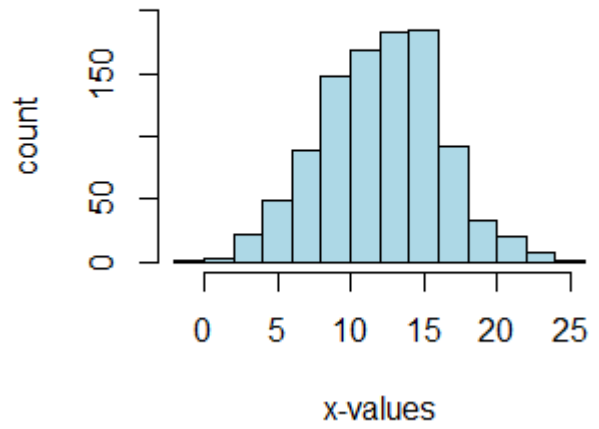
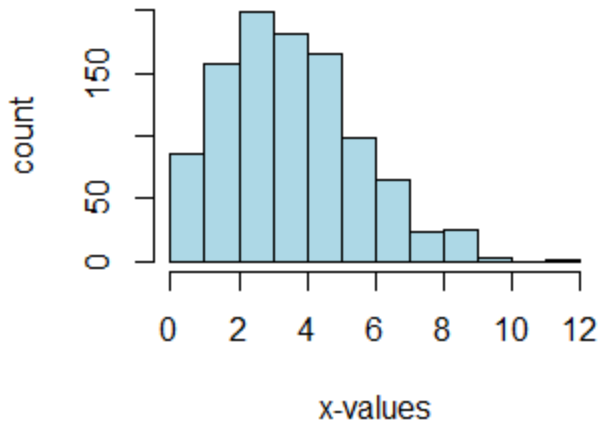


Math 189 – Chapter 3: Numerical Measures Exercises

1. Match the statistics to the graphs below.

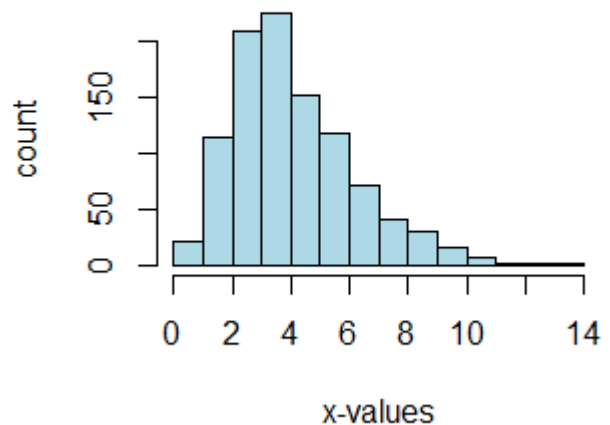
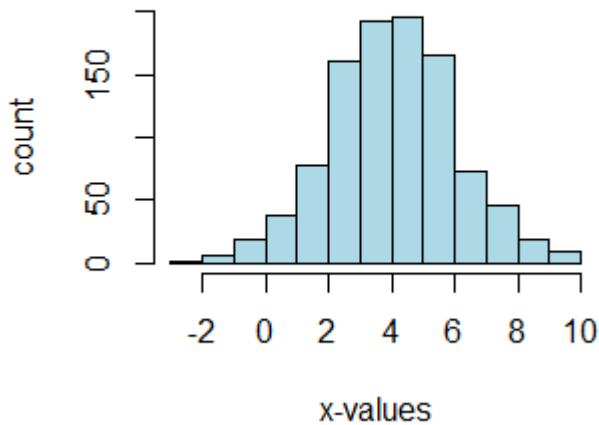
- a) $\bar{x} = 4, s = 4$
- b) $\bar{x} = 4, s = 2$
- c) $\bar{x} = 12, s = 4$
- d) $\bar{x} = 12, s = 1$



2. Pat finds the mean height of all twelve students in her physics class to be 68.0 inches. Just as she's finished that calculation, one more student walks in late. If that student is 63.0 inches tall, what is the mean height of all thirteen students?
3. Consider the following sets of data. Without calculating any values, state which set will have the higher standard deviation (or will they be the same?).

a) Set 1: 5, 10, 15, 20, 25	Set 2: 5, 5, 15, 25, 25
b) Set 1: 20, 21, 22, 23, 24	Set 2: 120, 121, 122, 123, 124
c) Set 1: 1, 2, 3, 4, 5	Set 2: 2, 4, 6, 8, 10
4. The Victoria Real Estate Board claims that in October of 2012, the average cost of a single-family home in Greater Victoria was \$592,000, while the median was \$527,000. Why is the mean greater than the median for housing prices? Explain.
5. For each of the two graphs below, which of the following statistics describe the graph best?

a) mean = 4.1, median = 3.6
b) mean = 4.1, median = 4.1
c) mean = 4.1, median = 4.6



6. Describe the distribution of the two graphs in question 5 above. If the graph is skewed, which direction is the skew?

7. A mystery shopper recorded the prices for a random sample of 15 canned goods at Thrifty's on a particular Saturday. The following week, the shopper returned and examined the new prices for the same 15 canned goods. For all but one of the cans, the two prices were exactly the same, and for the remaining can, the price had increased by fifty cents.

If the median price increased from the first week to the second, what can you conclude about the single price that went up?

8. Consider the following data set: 7, 7, 7, 7, 7, and 7. What is the mean and the median? What is the range? What is the standard deviation?