HW 2: Chapter 2: 74, 75a, 76, 78, 79, 80, 83, 84, 88, 92, 93, (94-99 (this is like one problem)).

74. Student grades on a chemistry exam were: 77, 78, 76, 81, 86, 51, 79, 82, 84, 99

a. Construct a stem-and-leaf plot of the data.

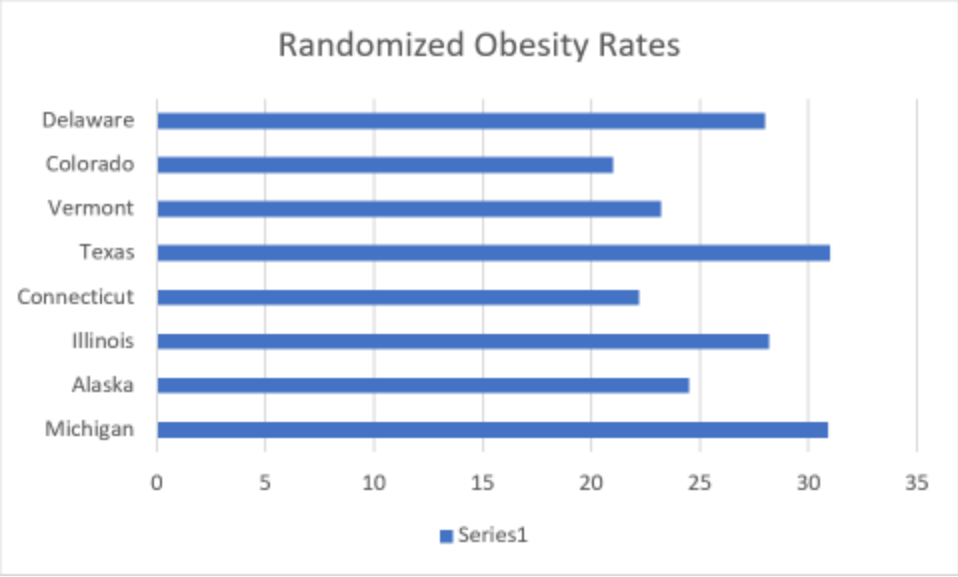
5	1
6	
7	6789
8	1246
9	9

b. Are there any potential outliers? If so, which scores are they? Why do you consider them outliers?

There is one potential outlier. I believe it is 51 since it seems that it is not in the range.

75.

a. Use a random number generator to randomly pick eight states. Construct a bar graph of the obesity rates of those eight states.



76.

1. Find the relative frequencies for each survey. Write them in the charts.

# of books	Freq.	Rel. Freq.
0	10	.1471
1	12	.1765
2	16	.2353
3	12	.1765
4	8	.1176
5	6	.0882
6	2	.0294
8	2	.0294

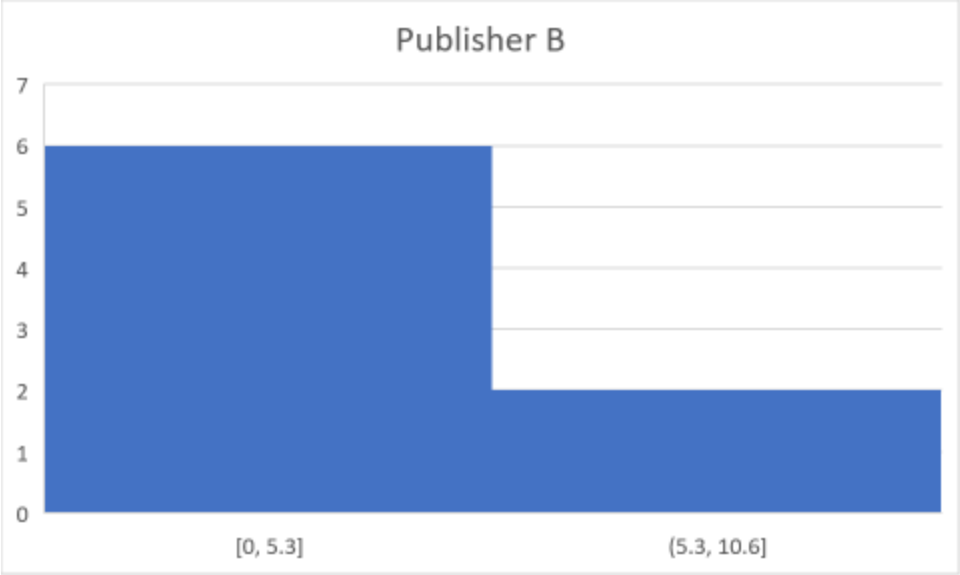
Table 2.62 Publisher A

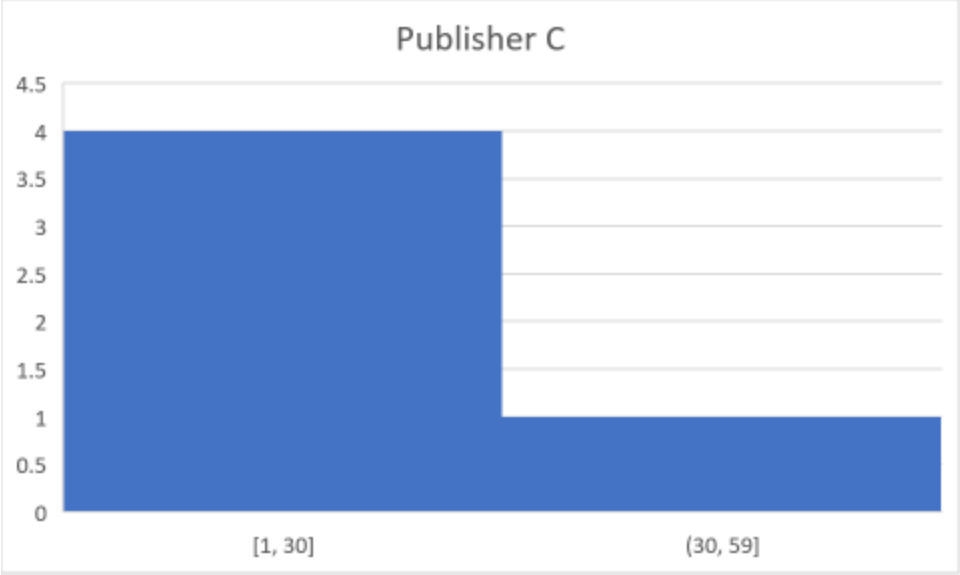
# of books	Freq.	Rel. Freq.
0	18	.1513
1	24	.2017
2	24	.2017
3	22	.1849
4	15	.1261
5	10	.0840
7	5	.0420
9	1	.0084

Table 2.63 Publisher B

# of books	Freq.	Rel. Freq.
0–1	20	.2857
2–3	35	.5
4–5	12	.1714
6–7	2	.0286
8–9	1	.0143

2. Using either a graphing calculator, computer, or by hand, use the frequency column to construct a histogram for each publisher's survey. For Publishers A and B, make bar widths of one. For Publisher C, make bar widths of two.





3. In complete sentences, give two reasons why the graphs for Publishers A and B are not identical.

   The graphs for Publishers A and B are not identical because the relative frequencies are different. The frequencies are also very different.

4. Would you have expected the graph for Publisher C to look like the other two graphs? Why or why not?

No because the frequencies are very different than the others.

5. Make new histograms for Publisher A and Publisher B. This time, make bar widths of two.

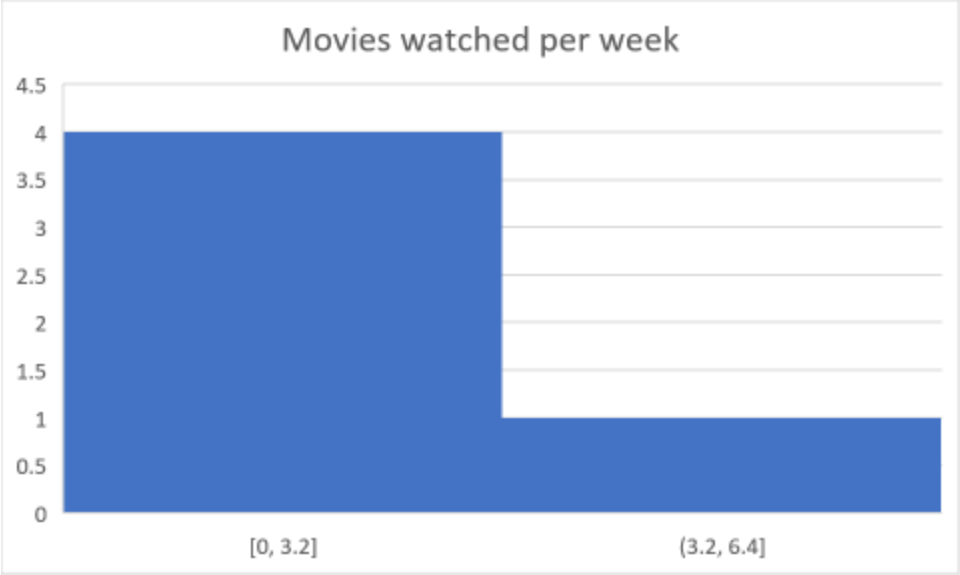
6. Now, compare the graph for Publisher C to the new graphs for Publishers A and B. Are the graphs more similar or more different? Explain your answer.

78.

# of movies	Frequency	Relative Frequency	Cumulative Relative Frequency
0	5	.2	.2
1	9	.36	.38
2	6	.24	.62
3	4	.16	.78
4	1	.04	.82

Table 2.67

1. Construct a histogram of the data.



79. A. 21%

80. D. Convenience

83.

1. What percentage of the survey answered "not sure"?

6%

2. What percentage think that middle-class is from $25,000 to $50,000?

44%

3. Construct a histogram of the data.
    1. Should all bars have the same width, based on the data? Why or why not?

Yes, that is how the histograms are supposed to align.

    2. How should the <20,000 and the 100,000+ intervals be handled? Why?

They need to be calculated using relative frequencies so we can collect the data.

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84.

A. 12-13
B. 2-10
C. 10
D. 10-12 because there the median is within that range
E. 0-2

88.

1. **Data 1** has more data values above two than **Data 2** has above two.
2. The data sets cannot have the same mode. This is false because they can have the same mode.
3. For **Data 1**, there are more data values below four than there are above four. That is false because their are more above four.

2. For which group, Data 1 or Data 2, is the value of "7" more likely to be an outlier? Explain why in complete sentences. Data one is most likely to outlier 7.

92. 26.7- 33.4

93.

A. The people are living longer
B. They are eating healthier.

(94-99)

A. 550
B. 1200

96. 750
97. 36%
98. Q3 - Q1
99. Over 40%