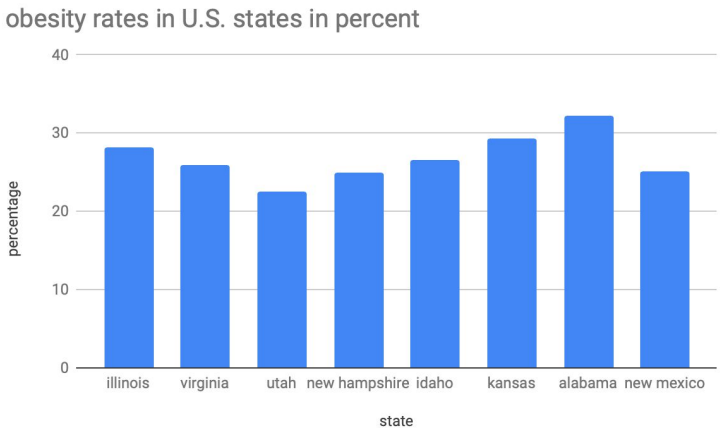
Homework #2

74.

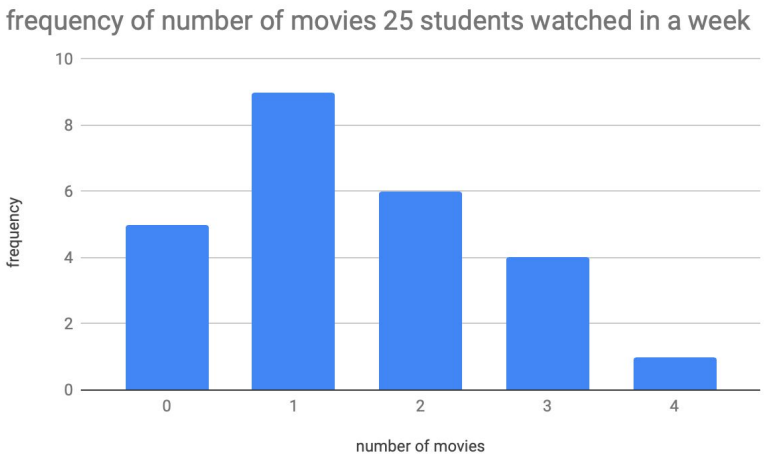
stem	leaf
5	1
6	
7	6 7 8 9
8	1 2 4 6
9	9

51 and 99 are the outliers, there is the biggest difference between those points and their next nearest value.

75

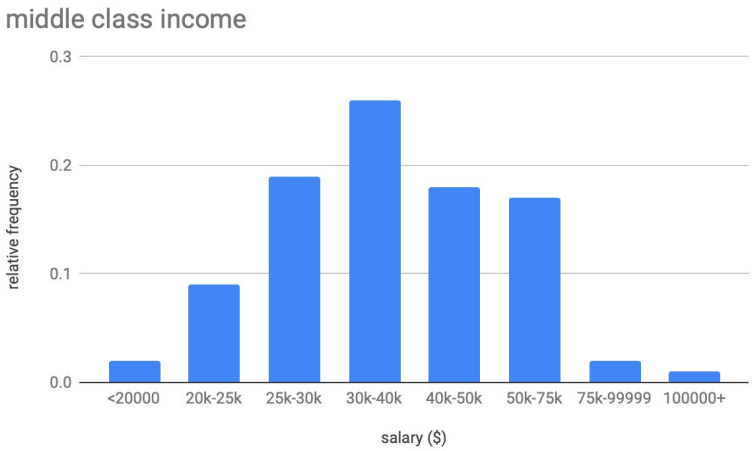


78.



# of movies	frequency	Relative frequency	Cumulative frequency
0	5	20	20
1	9	36	56
2	6	24	80
3	4	16	96
4	1	2	100

79. 41
80. Convenience
83.
    a. 0.06
    b. 0.63



    c.

No, the <20000 and 100000+ ranges may contain other data as well

d. The 40th percentile is between 30k-40k and the 80th percentile is between 50k-75k.

84.

a. The last quarter, 12-13
b. The second quarter, 2-10
c. IQR = 10
d. There is more data in the 10-13 interval, it contains two quarters, where the 5-10 interval only consists of one.
e. The 2-4 interval has the least data because it is only a part of the quarter, whereas the other data sets are inclusive of the full quarter.

88.

a. Since there is no known info on the amount of data in each set, data 2 may have a greater number of data values above two because it could be a larger data set.
   Since there is also no information on individual data values, the modes are unknown and could possibly be the same.
   Similar to the first statement, there are no known values to be able to compare them in each interval.
b. 7 is most likely to be an outlier in data 2 because it falls way above the rest of the data and has a bigger difference between the other 75% of the data compared to the difference in data 1.

92. 26.41%

93.

a. Rising median age in a population indicates a population with a longer lifespan
b.
   i. Decrease in amount of births
   ii. Decreased number of deaths
c. Possibly but not evident. The population in 1991 was greater than in 1980 and the median was greater, but there still could have been less children or the same amount of children or more children.

94. The median is the middle value in a set of ordered data. The median of 11 years will be approx. year 6, so about six years will have a FTES of 1014 or above.

95.

a. at or below: 1447.5 FTES
b. at or above: 528.5 FTES

96. Standard deviation: 474 FTES

97. 50%, the values are from the first and third quartiles and together make up 50%

98. The IQR gives the middle 50% of data, the IQR is 919

99. The median is 0.03 standard deviations away from the mean.