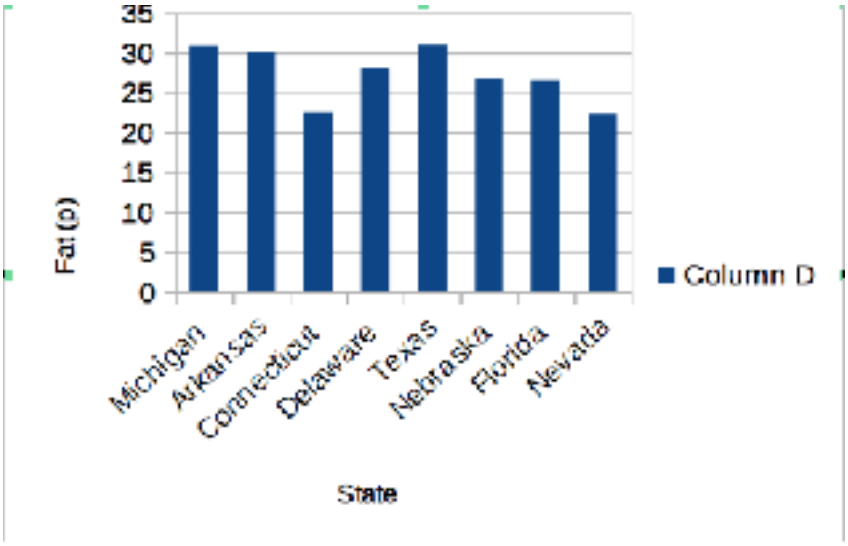
Mark Borovykh

Homework 2

74)
a)
5-1
6-
7-6,7,8,9
8-1,2,4
9-9

B) 51, 99 are outliers , they are outliers, because they lie outside the main distribution



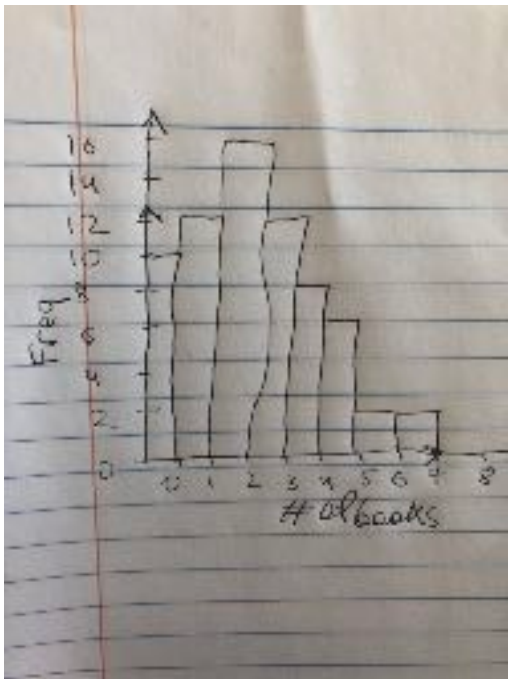
76) **A**

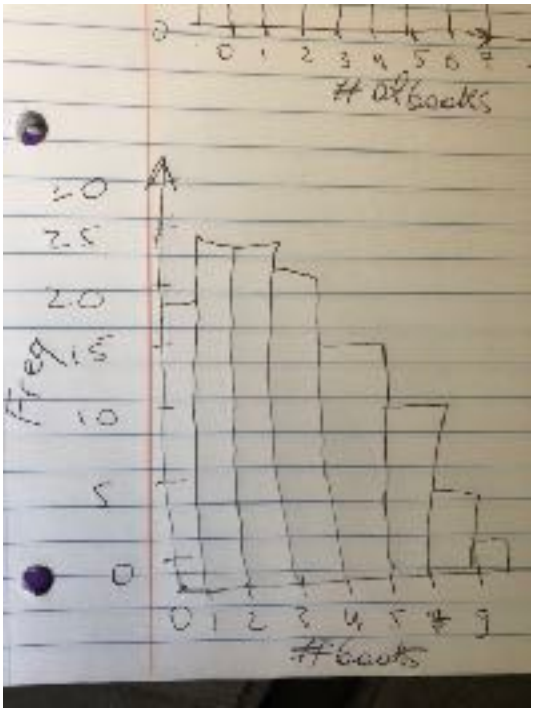
#of books	Freq	Relative Freq
0	10	0.1470588235
1	12	0.1764705882
2	16	0.2352941176
3	12	0.1764705882
4	8	0.1176470588
5	6	0.0882352941
6	2	0.0294117647
8	2	0.0294117647

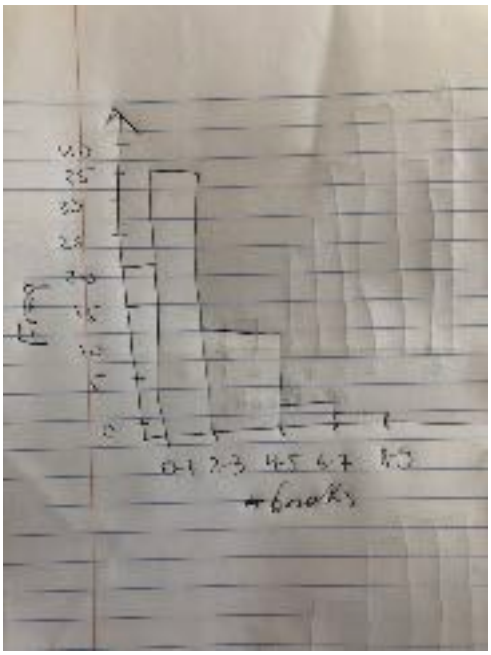
# of books	Freq.	Rel. Freq.
0	18	0.1512605
1	24	0.20168067
2	24	0.20168067
3	22	0.18487395
4	15	0.12605042
5	10	0.08403361
7	5	0.04201681
9	1	0.00840336

# of books	Freq.	Rel. Freq.
0–1	20	0.28571429
2–3	35	0.5
4–5	12	0.17142857
6–7	2	0.02857143
8–9	1	0.01428571

B)

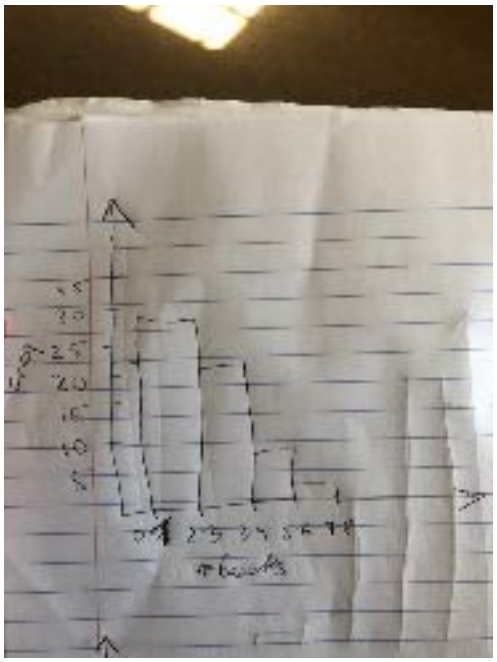


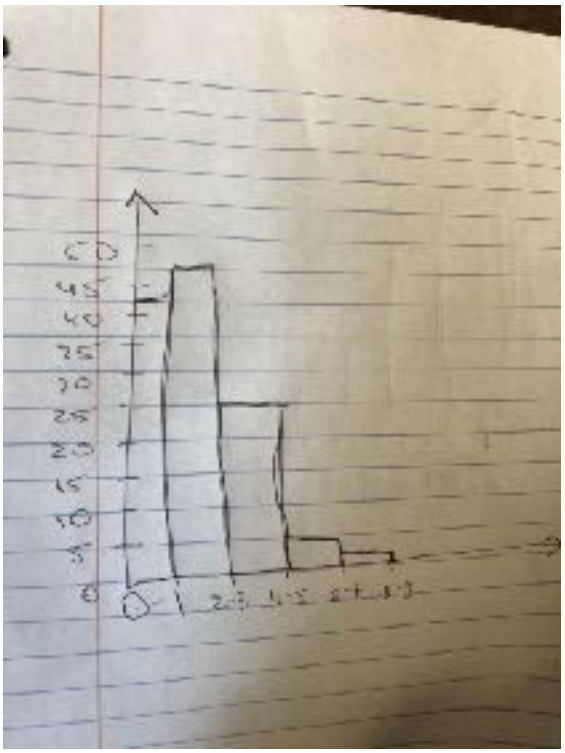




C) The graphs A and B are not identical because they have different total amount of books and have different standard deviations. Besides that, the histograms illustrate the difference between them.

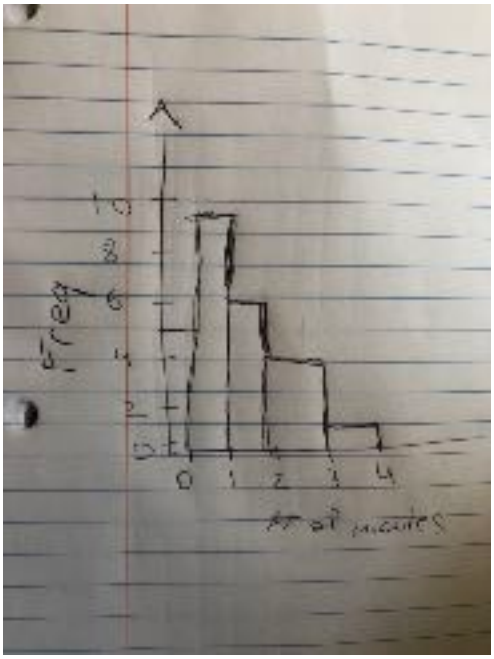
D)No, because it has different bin width and total amount of books.
E)





F) More Similar

78) A)

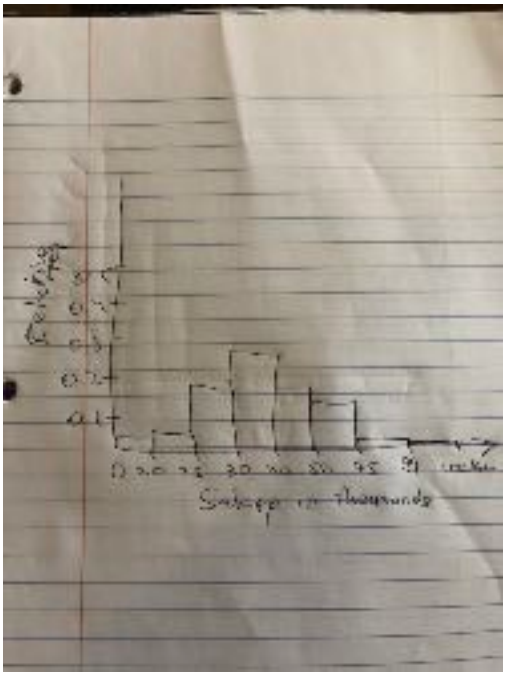


B)

# of movies	Frequency	Relative Frequency	Relative Frequency
0	5	0.2	0.2
1	9	0.36	0.56
2	6	0.24	0.8
3	4	0.16	0.96
4	1	0.04	1

79) C
80)B

83)
A) **6%**
B) **67%**
C) **I.- no they should not be the same width because it will make the graph too wide.**
II. I made my first bin 0-20000 so it reflects this region. I also put a bin 100K+



D)

84) A) 4th quarter has the smallest spread of data =1
B) The largest spread is in the 2nd quarter=8
C) IQR=Q3(12)-Q1(2)=10
D) Interval 10-13 has more data since it captures at least 25%
E) II. Since, the other intervals include 1/4th of the data

88)a)

`I. We cant tell which data has more of a certain value. The box plots tell us where the certain value is located

ii.Mode is the number repeated most often. The box plots can have the same mode, they tell us about median, and quartiles, not the mode…

iii. The box plots don't tell us the amount of certain value, The box plots tell us where the certain value is located

B) It is more likely to be an outlier in the data 2, since 7 is further from the median and the quartiles

92. 26.56%

93.

A rising median age in a population usually indicates that more babies are being born

A rising median age in a population usually indicates an aging population

C. No

94. =6 years, since the 1014 FTES is the median

95.A. 1,447. B. 528.5 FTES

96. 474 FTES

97. 50 % since Q1:Q3 represents the plot with 2 quarters

98. IQR- Q3-Q1= 919

99. 0.029σ away