b. Darken the bar in which your state's data value would fall. Does your state tend to have more or fewer residents 65 and older than the other states, or would you say that your state is close to typical?

NY has more residents age 65 or older than most states

c. Describe the overall shape of the distribution of age 65 and older. Identify any gaps in the distribution and potential outliers.

The distribution is generally skewed to the right. There are two gaps (2,000-2,500 thousand and 3,500-4,000 thousand). CA with 4,247,000 may be an outlier

d. Redraw the histogram this time using class intervals of 1,000 thousand. What information is now hidden using this size of class intervals? gaps

Exercise 1d.

Count (in thousands)	Tally	Frequency
0-999	23+17	40
1000-1999	4+3	7
2000-2999		2
3000-3999		1
4000-4999		1

Put graph on graph paper.

4. In a laboratory experiment, students were asked to estimate the breaking strength of wooden stakes. The dimensions of the stakes, measured in inches, were 8 × 1.5 × 1.5. From the experiment students found the load in pounds needed to break the stakes in a sample of 20 stakes. The class data, measurements of the breaking strength ~~in hundreds~~ of pounds, appear below.

166	161	115	120	159
165	155	151	163	160
156	164	118	152	168
144	166	164	161	160

a. Even though the wooden stakes were nearly identical, did the breaking strengths vary? Explain.

Yes because we see all different result

b. Make a histogram of these data. Use class intervals of width 5.

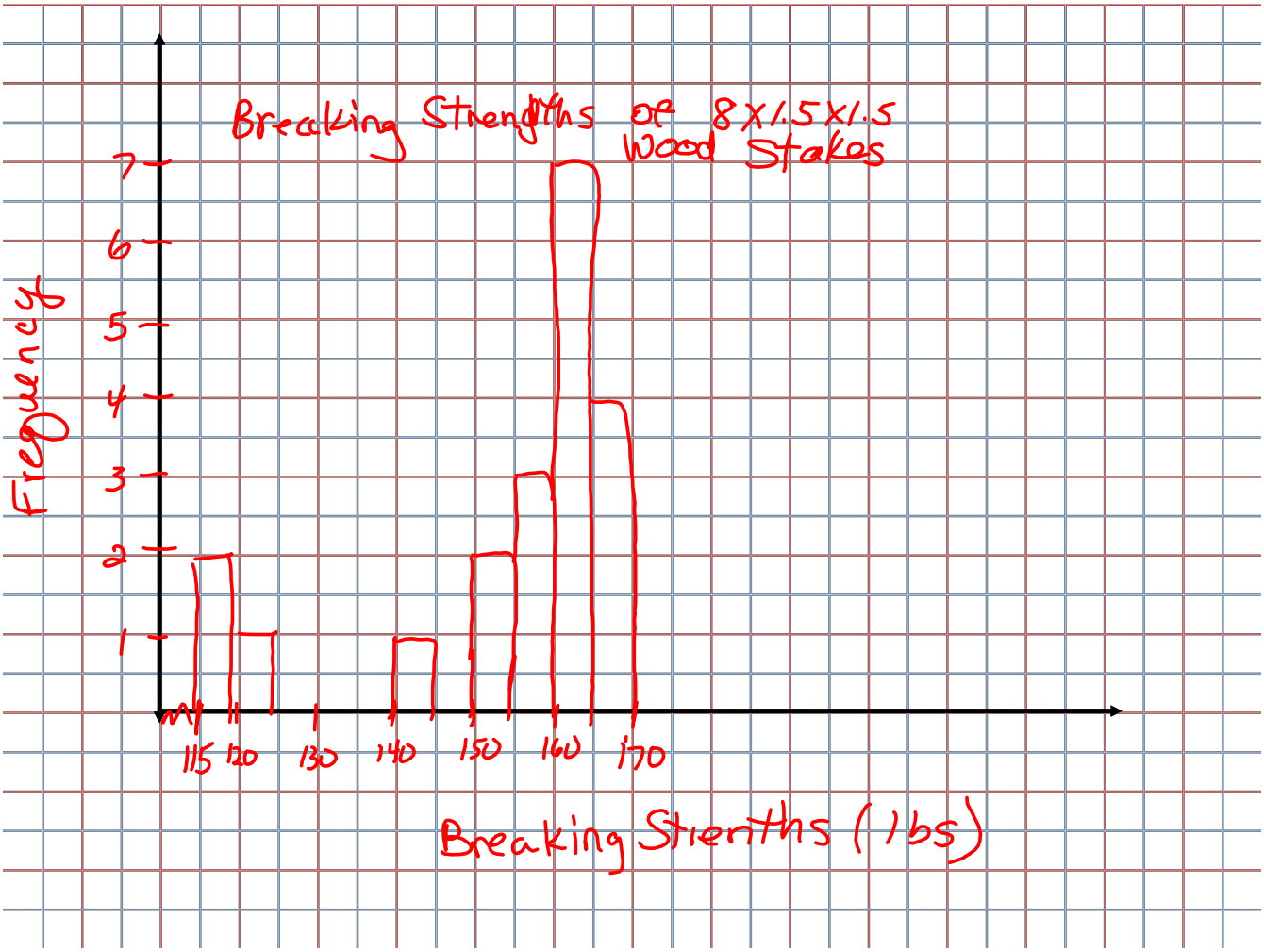
166	161	115	120	159
165	155	151	163	160
156	164	118	152	168
144	166	164	161	160

part d

Exercise 4b.

Breaking Strength (in hundreds of pounds)	Tally	Frequency	Percent
115-119		2	
120-124		1	
125-129		0	
130-134		0	
135-139		0	
140-144		1	
145-149		0	
150-154		2	
155-159		3	
160-164		7	
165-169		4	

Put graph on graph paper.


Breaking Strengths of 8X1.5X1.5 Wood Stakes
Frequency
7
6
5
4
3
2
1
115
120
130
140
150
160
170
Breaking Strengths (lbs)

c. Which class interval(s) contained the most data?

160 - 164

d. Modify your histogram in (b) so that the scale on the vertical axis is the percent of the stakes whose breaking strength is in each class interval. How does the shape of your modified histogram compare to your histogram in (b)?

Shape the same, just different y-axis scale.

e. Write a short paragraph describing key features of the distribution of breaking strengths.

The overall pattern is skewed left. There are three values between ~~11,500~~ 115 - 124 ~~12,400~~ which are significantly farther from the rest of the data so they may be considered outliers. A majority of the stakes broke between ~~15,000~~ 150 and ~~17,000~~ 170.

Homework –
Packet pg. 8-9