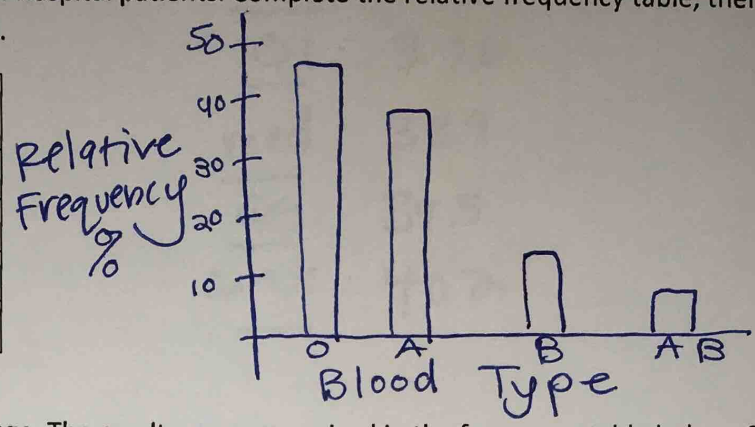


HW 6 - BAR GRAPHS, HISTOGRAMS AND BOX PLOTS

NAME key 2017

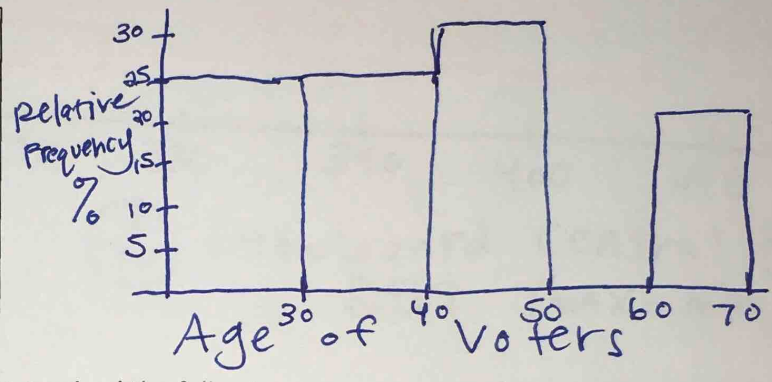
1. The table lists blood types in a sample of hospital patients. Complete the relative frequency table, then construct a **BAR GRAPH** for the relative frequency data.

BLOOD TYPE	FREQUENCY	RELATIVE FREQUENCY
O	22	0.44 → 44%
A	19	0.38 → 38%
B	6	0.12 → 12%
AB	3	0.06 → 6%



2. In a survey, 20 voters were asked their age. The results are summarized in the frequency table below. Complete the relative frequency table and construct a **HISTOGRAM** for the relative frequency data.

AGE OF VOTER	# OF VOTERS	RELATIVE FREQUENCY
20-29	5	.25 → 25%
30-39	5	.25 → 25%
40-49	6	.30 → 30%
50-59	0	.00 → 0%
60-69	4	.20 → 20%

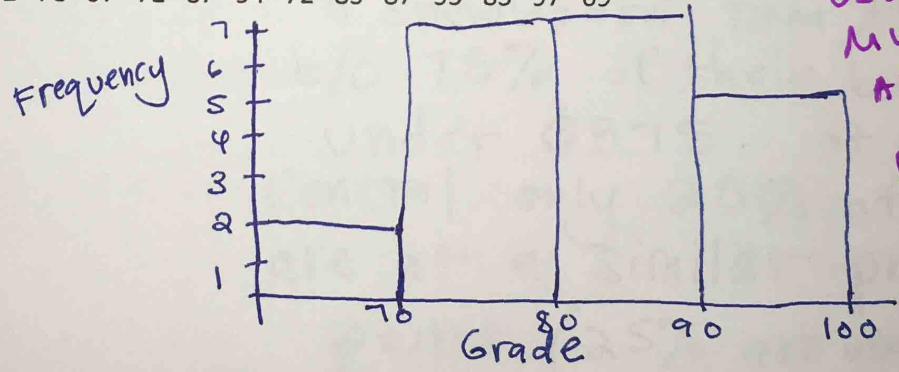


3. The students in Mrs. Teacher's Spanish class received the following scores on a test. Construct a **HISTOGRAM** to represent the data. Use 4 classes with a class width of 10 and begin with a lower class boundary of 60.

75 94 87 83 78 72 65 75 82 78 97 72 87 94 72 83 87 95 85 97 69

SCORES	FREQUENCY
60-70	2
70-80	7
80-90	7
90-100	5

total: 21

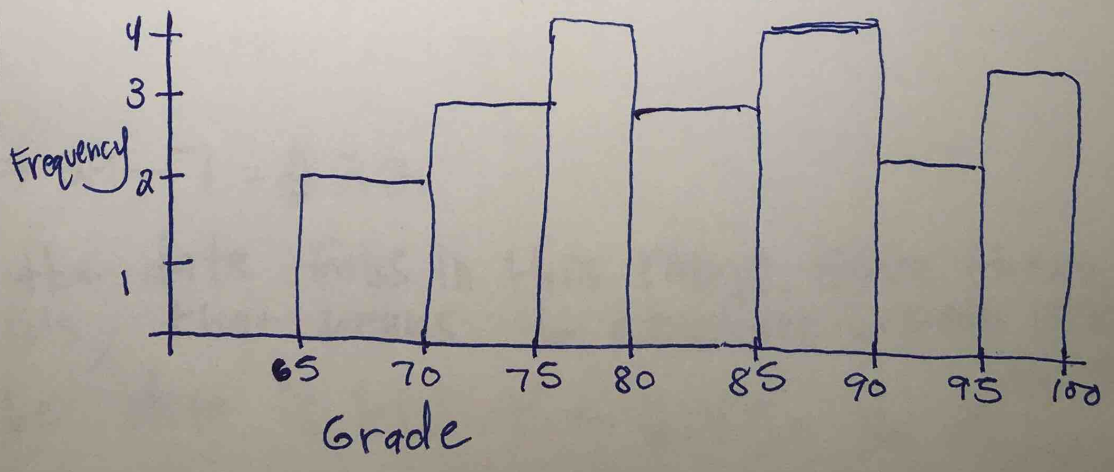


we know that usually we must have AT LEAST 5 BARS!

Create a new frequency table and **histogram** using a class width of 5 and a lower class boundary of 60.

SCORES	FREQUENCY
60-65	0
65-70	2
70-75	3
75-80	4
80-85	3
85-90	4
90-95	2
95-100	3

total: 21



④ Middletown

Snowboard Central

min: 345

min: 343

Q1: 350

Q1: 370

med: 358

med: 389

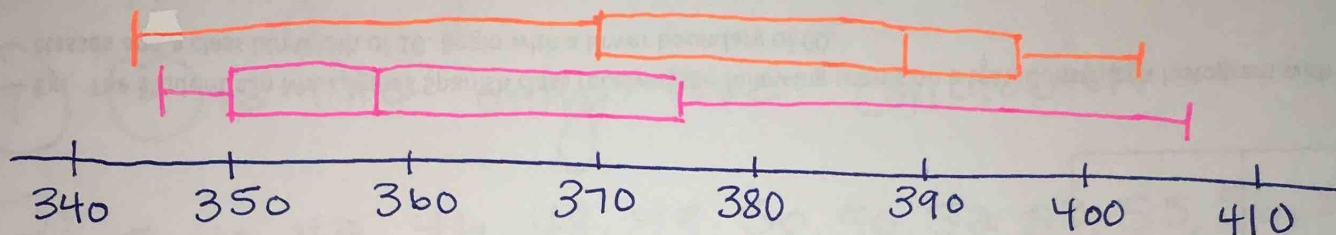
Q3: 375

Q3: 395

max: 405

max: 402

⑥



③ Middletown median is \$358

④ Snowboard Central range is \$59 (max-min)

⑤ \$375 (Q3)

⑥ I would rather purchase a snowboard from Middletown b/c 75% of their boards are under \$375 ... at Snowboard Central only 25% of boards are at a similar price point (25% are under 370)

⑤ a. Q3 = \$26

⑥ b. max-min $\rightarrow 29 - 7 = \$22$

⑦ c. 50% of the data falls in this range. Since there are 12 CD's, that means 6 CD's are between 14.50 & 26.00

⑧ d. 25% of the data is less than \$14.50 so 3 CD's

6) median = 71 or 72 (either is fine)

6) IQR $\rightarrow Q_3 - Q_1$
 $77 - 62 = 15$ (yours may be slightly off from mine)

7) a little less than 25% failed the test. Since $Q_1 \approx 62$, that means 25% made less than a 62. Since failing is a 59 or lower, it will be the majority of that 25%.

7) 4 is the only true conclusion

8) 5, 40, 42, 46, 48, 49, 50, 50, 52, 53, 55, 56, 58, 75, 102

min: 5 Q1: 46 med: 50 Q3: 56 max: 102

$\frac{-15}{31}$ IQR: 10

*anything less than 31 is an outlier $\rightarrow 5$

$\frac{+15}{71}$
*anything higher than 71 is an outlier $\rightarrow 75, 102$

