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MATH 155 515
PROJECT 1

Purpose: To study the effects of various factors on pulse rates, using records of the height, weight, gender, smoking preference, activity level, and resting pulse rate of 92 undergraduate students

What is your sample?

- 92 undergraduate students

What data are you using?

- Data on height, weight, gender, smoking preference, activity level, and resting pulse rate.

How big is the data set?

- The dataset is 92x8, so 92 students each having a value in 8 different attribute/columns

What will be done with that data?

- The data will be manipulated to draw comparisons and correlations between the many attributes then create visual representations of such.

What is the mean (average) height and weight of the Statistics Students?

- Height - `68.72`
- Weight - `145.2`

What is the mean (average) height and weight of the male and female Statistics Students?

- Male Height Mean - 70.754
- Female Height Mean - 65.4

- Male Weight Mean - 158.263
- Female Weight Mean - 123.8

Write out the “five number summary”: min-Q1-M-Q2-max for males and females combined and Separated.

- Height Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
92	61	66	69	72	75	68.717	3.659	13.39

- Weight Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
92	95	125	145	155.5	215	145.152	23.739	563.559

- Male Height Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
57	66	69	71	73	75	70.754	2.583	6.671

- Male Weight Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
57	123	145	155	170	215	158.263	18.636	347.305

- Female Height Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
35	61	63	65.5	68	70	65.4	2.563	6.567

- Female Weight Five Number Summary

N	min	firstQ	median	thirdQ	max	mean	StDev	Var
35	95	115.5	122	130.5	150	123.8	13.372	178.812

What are the most frequent heights and weights of the students?

- Heights: 69 & 68, Weights: 150, 155

How many students have these heights and weights?

- Heights: 10 & 10, Weights: 10 & 10

By looking at the histogram what can be said about the heights and weights of the students?

- The heights and weights are uniformly distributed. With both being bimodal.

Does this agree with the results you found from the frequency tables? How meaningful do you think these results are? Why?

- This does agree because the count of students that have these heights and weights both are equal to 10. It also shows that the heights and weights are uniformly distributed.

These results are meaningful because this means each height or weight is equally probable to happen.

WE DIDN'T DO DOT PLOTS SO THIS IS SPECULATION

How does the dot plot compare to the histogram above? Are there any similarities?

- They are relatively similar, showing that they are bimodal.

By looking at the dot plots what can be said about the heights and weights of females and males?

- The average heights and weights of males are larger than females.

How meaningful do you think these results are? Why?

- They are meaningful because it shows the disparities between the genders.

Are the graphs (dot plots, box plots and histograms) consistent? Do graphs match the five number summaries? Compare the entire data and data separated by gender.

- It is consistent, and the graphs match the summaries.

First qualify gender and smoking habits as ordinal or nominal data.

- Gender is nominal and smoking habits are nominal.

Referring to the description of the data set at the beginning of the lab and clicking on the pie chart, what is the percentage of male and female in the sample?

- 38% Male, 62% Female

What percent of students smoke regularly?

- %0.30

How does the bar graph compare with the pie chart? Can you tell percentages or proportions?

- Pie charts are better for displaying percentages.

What is the number of smoking males? What is the number of non-smoking females?

- Smoking Males: 20, Non-smoking Females: 27