Worksheet 10/18/2023

Consider a set of data in which each datum falls into a category.

Frequency of a category = number of data values in that category

Relative frequency = fraction or percentage of the category over the total

Cumulative frequency = number of data values in the category and all preceding categories

Binning data = a method to categorize data into different ranges of values

Data types: qualitative, quantitative

Data can be visualized by graphs/charts: bar charts, line charts, pie charts, multiple bar graphs, multiple line charts, stack plot, …

1) Final grades of 30 students in a math class:

A A A A A A B B B B B B C C C C C C C C C D D D D D F F F

Make frequency tables for the following data sets. Include columns for relative frequency and cumulative frequency.

2) Use the 5-point bins (95 to 99, 90 to 94, etc.) to make a frequency table for the following data set:

89, 67, 78, 75, 64, 70, 83, 95, 69, 84, 77, 88, 98, 90, 92, 68, 86, 79, 60, 96

Include columns for relative frequency and cumulative frequency.

3) The following table shows beef production of the six largest beef producers in the world (2020 data from the USDA). Make a bar graph for these data, with the bars in descending order.

Beef producer	Amount of beef (million metric tons)
United States	12.4
Brazil	10.1
European Union	7.8
China	6.6
India	3.7
Argentina	3.2

4) Among the registered voters in a certain county, 25% are Democrats, 25% are Republicans, 40% are Independents, and 10% are non-affiliated. Construct a pie chart to represent the party affiliations.