

## 2023-2024 AP Statistics Summer Assignment

The purpose of this assignment is to familiarize students with a variety of graphical displays. Students may not be required to create all the following types of graphs on an AP exam but will be required to interpret information from all these types of graphs. To prepare for a rigorous AP Statistics curriculum, students will create ONE of each type of graph below from raw data of their choice.

### Directions:

1. Familiarize yourself with each of the following types of graphs below:

- Bar Graph
- Pie Chart
- Mosaic Plot
- Dot Plot
- Boxplot
- Stemplot
- Histogram
- Cumulative Frequency Plot

### Note:

- Each type of graph is accompanied by a link in the document below. Each link will provide additional information and/or examples for these types of graphical displays and may also provide information on how to create them.
- Students are encouraged to use other resources if the link does not provide enough information for them to be able to create the graph on their own.

2. Collect or create raw data that you can use to create each type of graph.

- You must include the raw data and its source with each graph either in a table or list as appropriate.
- Please list the source of your data by listing the website, article, or, if you created the data on your own explain how (i.e., a survey or through observation/experimentation).
- You DO NOT need to have different sets of data for each type of graph, data sets may be used more than once as appropriate.

3. Create your graphs from your data.

- Make sure to properly label and title your graphs.
- You can create graphs digitally, or by hand.

4. Submit your Summer assignment (hard copy or digital) within the first two weeks of return to the 2023-2024 school year.

\*\*If you have any questions about your summer assignment, feel free to email me, Mrs. Sembritzky, using the following email address: [sembritzkysn@lisdeagles.net](mailto:sembritzkysn@lisdeagles.net). I will be checking my email periodically over the summer.

I look forward to meeting you all in the fall!

Sincerely,

Mrs. Sembritzky

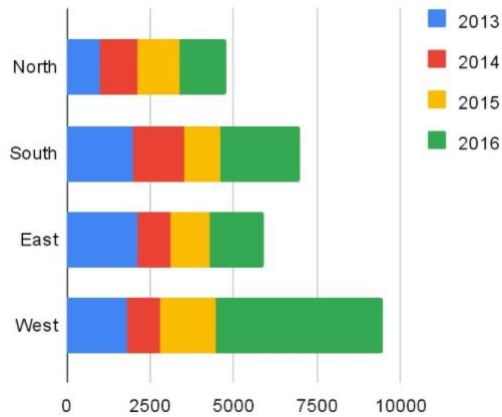
## Types of Graphs Quick Reference:

Each of the following types of graphs is accompanied by a link. Each link will provide additional information and/or examples about these types of graphical displays and how to create them.

### Categorical Data

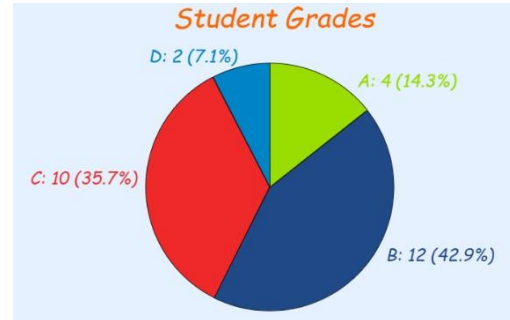
#### Bar Graph:

ABC SALES RECORD



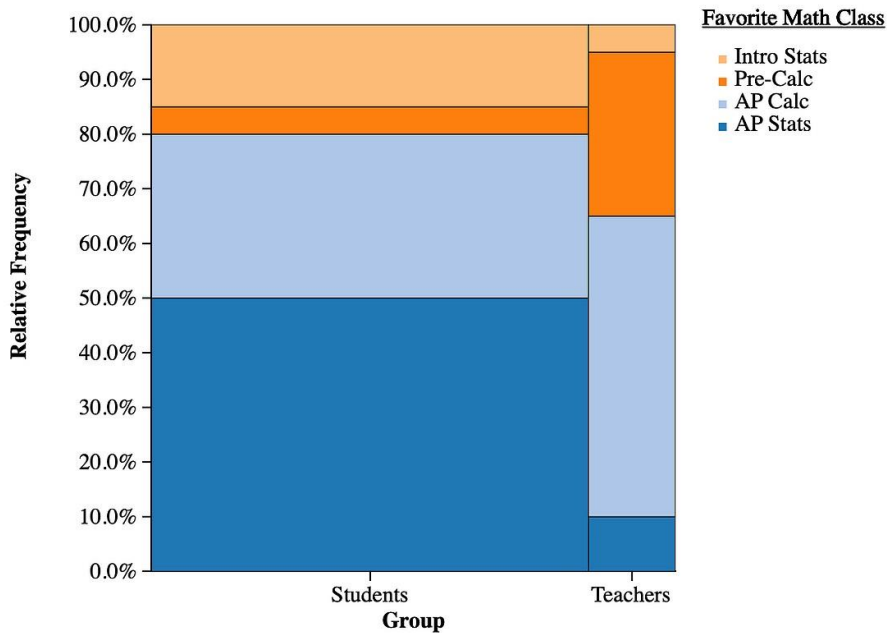
<https://www.formpl.us/resources/graph-chart/bar/>

#### Pie Chart:



<https://www.mathsisfun.com/data/pie-charts.html>

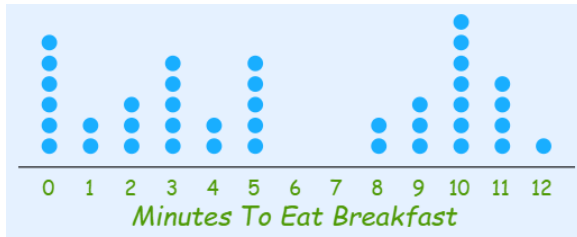
#### Mosaic Plot:



<http://www.pmean.com/definitions/mosaic.htm>

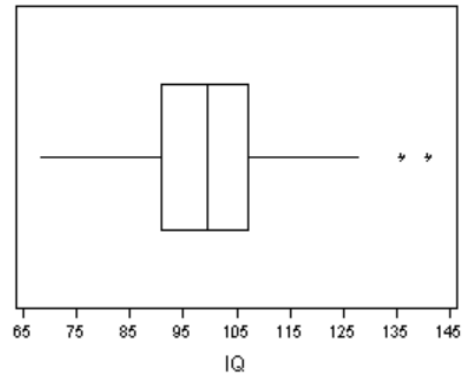
## Quantitative Data

### Dot Plot:



<https://www.mathsisfun.com/data/dot-plots.html>

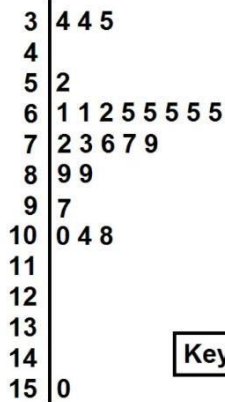
### Boxplot:



<https://online.stat.psu.edu/stat414/book/export/html/741>

### Stemplot:

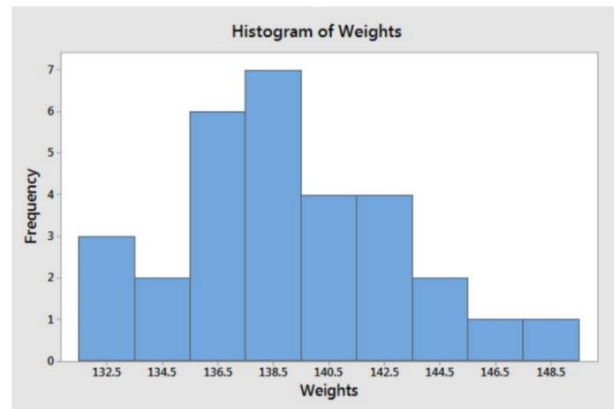
Final Sale Price (to nearest dollar)



Key: 8|0 = 80

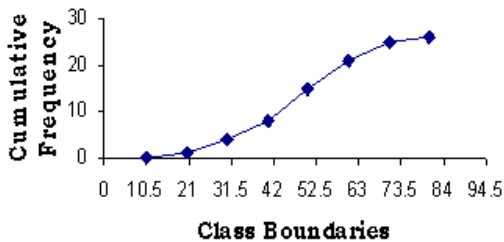
<https://www.mathbootcamps.com/how-to-read-a-stemplot/>

### Histogram:



<https://chartio.com/learn/charts/histogram-complete-guide/>

### Cumulative Frequency Plots:



<https://www.onlinemathlearning.com/cumulative-frequency-graph.html>