

1/30/2021

Percentiles

90th percentile says that 90% of the data is below that value

20th percentile says that 20% of the data is BELOW that value

See Excel

Deciles: break the data up into 10 parts instead of 100 parts (percentile)

Quartiles: breaks the data up into only 4 parts (is a formula in Excel for quartiles)

Pie Charts/Circle Graphs

Line Graphs

Bar Graphs

Pie Charts – display proportions of a whole, good for percentages, all percentages should add to 100%.

Displays categorical data: values are expressed in words (categories); not numbers

You generally don't want too many categories. 2-5 categories is ideal

Line graphs are more typically math-y because they contain two axes and both are numbers. The numbers on the horizontal axis must be sequential: time data. Numbers are on the vertical axis.

Bar charts – one axis is categories, and the second axis is numbers: can be percentage, but can also be counts, or revenue, or other numerical values. Can display multiple numerical variables on the same graph (assuming we have comparable numerical values).

None of these graphs should ever display the total of all the data on the same graph.

Features of a good Pie Chart:

- 1) Display the percentages of each pie slice
- 2) It should have a legend or each slice should be labeled
- 3) It should have a descriptive title – something a reader will understand the context of without the raw data
- 4) Avoid displaying “counts”
- 5) Avoid too many visual effects, like 3D.

Features of a Good Line graph:

- 1) Axis Labels
- 2) Descriptive Title
- 3) Sequential data on the x-axis, numerical data on the y-axis
- 4) If you have only two columns of data, you should have only one line
- 5) Avoid 3D

Features of a Good Bar Graph:

- 1) Vertical axis should (usually) start at 0 – you may need to check!!!
- 2) Can make a bar graph from raw data (and then you can chart type if you want)
- 3) Label axes

- 4) Provide a descriptive title
- 5) Avoid 3D
- 6) Use stacked graphs for specific purposes (think before using)

Pivot tables can be used to summarize data

Pictogram

Is a bar graph that uses images instead of blank bars.