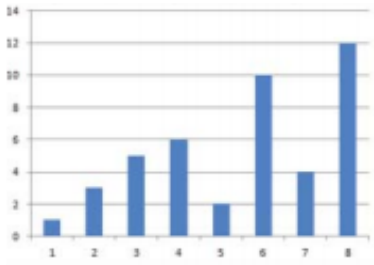


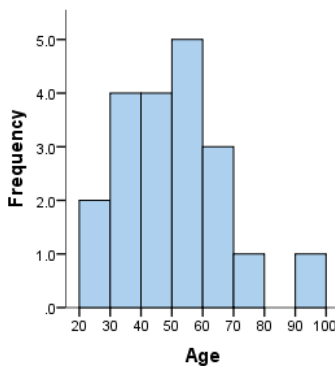
## What Type of Graph Should I Use? Reference Sheet

There are many ways to display data. Each type has unique characteristics and best use. Use this sheet to help you when deciding what type of data representation to use.



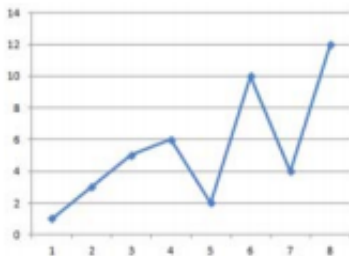
### Bar Graph

Bar graphs are very versatile graphs and can be used for many things. They can be used to display data between different groups or compare results for different categories. When displaying trends over time, bar graphs are better for comparing larger changes or differences in data. Bar graphs can also display numerical data that falls into categories (discrete variables). Shoe size is an example of a discrete variable.



### Histogram

Histograms can often be confused for bar graphs. Though they look similar, they are used to represent different types of variables. Histograms are used to represent numerical data over intervals (continuous variables). Age, height, and weight are all examples of continuous variables.



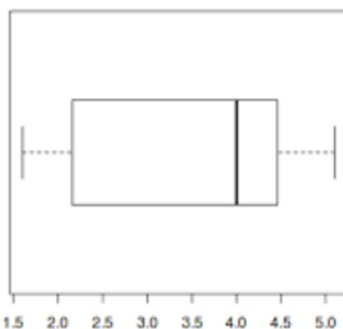
### Line Graph

Line graphs are best used to display trends or changes over continuous periods of time. They are better than bar graphs for showing small intervals of change.

Stem	Leaves
2	0 3 5
3	1 2 6
4	0 2 3 4
5	0 3 6 7 8
6	1 2 5
7	3 4
8	2
9	
10	2 5

### Stem and Leaf Plot

Stem and leaf plots are tables that split each data point into “stems” (first or first few digits of a number) and “leaves” (last digit of a number). Stem and leaf plots are similar to histograms because they show the shape of the distribution and use intervals. Instead of using bars to show frequency, stem and leaf plots use the actual data entries. For example, the first row of the stem and leaf plot to the left represents the numbers 20, 23, and 25.



### Box Plot

Box plots are used to show the basic shape of a data set. It simply displays the five number summary of any *numerical* set of data (minimum, first quartile, median, third quartile, and maximum.) Box plots are useful in identifying outliers and comparing different data sets.