Statistics

- population - an entire group
- sample - part of the population
- random sample - every object/person has an equal chance of getting picked
- biased sample - a sample that does not accurately represent the population

- the most representative samples are random and unbiased
- the bigger the sample, the more representative

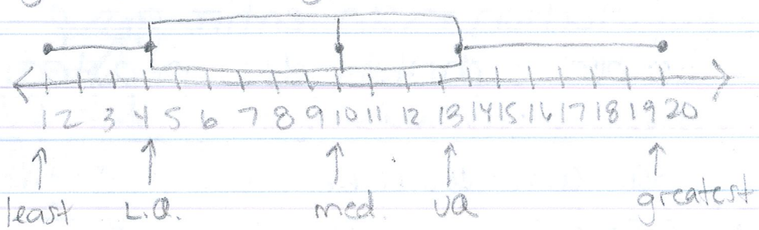
Dot Plots - every dot represents a number in the data

Box Plots - list data in order from least to greatest and find the 5 values: least, LQ, median, UQ, greatest

Ex: 1, 4, 4, 8, 12, 13, 14, 20

1	4	4	8	12	13	14	20
least	L.Q		median		U.Q.		greatest
1	4		10		13.5		20

to graph : only 5 points



least - LQ 25%
LQ - med 25%
med - UQ 25%
UQ - greatest 25%

} LQ - UQ 50%

Predicting Probability
↳ set up proportion!
first fraction = sample
second fraction = x / population

Ex: In a sample, 3 out of 5 people are right-handed. How many out of 50 would you expect to be right-handed

$$\frac{3}{5} \overset{\times 10}{=} \frac{x}{50}$$

30 people

Comparing Data/Analyzing Data

Dot Plot:

shape: evenly distributed
clusters
skewed ⌣ or ⌢

center: where is most of the data
median, mode

spread: outliers
range

mean: average: ① add all numbers
② divide by total numbers

median: middle number in data from least to greatest

mode: most occurring number

range: difference of greatest and least

Box Plots - describe SPREAD

shape: size of whiskers
size of box

center: median

spread: range
interquartile range (UQ - LQ)

Mean Absolute Deviation - M.A.D.

1) Find the mean
2) Find the differences of the mean with every data value
3) Find the mean of the differences

measures the spread. How far away the numbers are from the average
the larger the MAD, the more spread