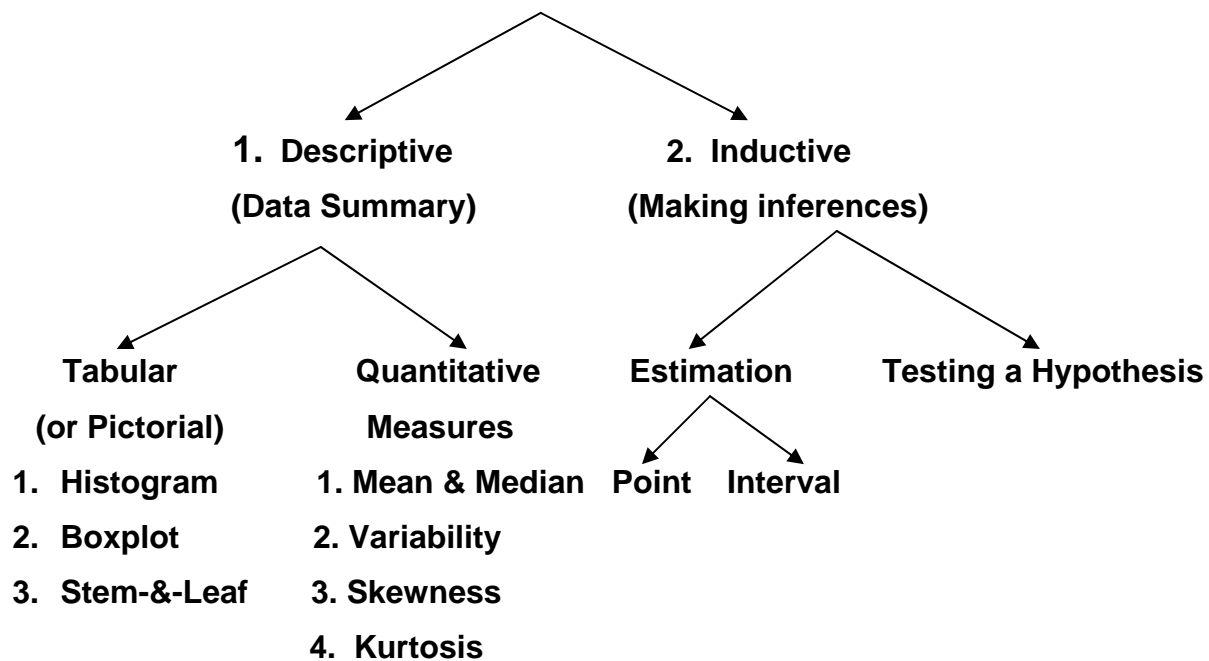


STATISTICS

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The quantitative measures are of central tendency (such as the sample mean \bar{x} and the sample median \tilde{x}), of variability (such as the standard deviation of the sample S , R/d_2 (used in QC), where $R = x_{(n)} - x_{(1)}$, and the IQR = $(Q3 - Q1)$, of skewness (asymmetry), and of Kurtosis (peakedness in the middle and heaviness in the tails). The standard deviation measures the spread (or the scale) of a data, while skewness and kurtosis describe the shape of a data.

The reader should be cognizant of the fact that there is a different branch of Statistics, called Bayesian, where parameters are assumed to have a prior probability distribution based on our belief before sampling, unlike the field of Classical Statistics, where parameters are generally assumed to be unknown constants. In Bayesian Statistics, after the sample is drawn, its marginal distribution is used to construct (or modify) the prior to a posterior distribution for the same population parameter using the sample information.