Statistics

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Symbol	Descriptive
Σ	Summation
Π	pie
n	size of sample
N	size of population
$n!$	factorial
npr	permetation
$\binom{n}{r}$	Combination
S^2	variance of the sample
S	standard Deviation
σ^2	sigma/ variance of the population
σ	standard Deviation
μ	Meyo, it is Mean $= \bar{x}$
λ	Lemda
$\cap$	intersection

Symbol	Descriptive
$\cup$	Union
A^c, A'	Complement
$E(x)$	Expected of X
$cov(x,y)$	Covariance between X & Y
$Pr(A)$	probability
$pr(A/B)$	Conditional of probability A given B
f_i	frequency absolute
$\|\|$	Event
E_i	observation x_i or y_i
x_i, y_i	
R	Range
$\overline{Me}$	The Median
$\overline{Mo}$	The mode
M.D.	The Mean deviation
C.V.	The coefficient of variation
SS	Sum of square.

Types of statistics

1- Descriptive statistics

Consists of Method for organizing, displying and describing data by using tables and summary measures.

2- Inferential statistics

Consists of methods that use sample results to help make decisions or prediction about ap population:

Def: The collection of a few element selected from a population is called a sample.

2- A population is the collection of items under decision it may be finite or infinite.

3- A sample drawn is such away that each element of the population has the same chance of being selected is called a random sample.

4- A variable is a characteristic under study assumes different values for different elements.

- The value of the variable for any element is called an observation.

* Types of variables:-

1- Qualitative variables: It is the variable that we can not assume a numerical value.

2- Quatitative variables:- It is a variable whose can be put in numerical values.

a- Discrete variable:- whose values are countable for example :(number of the people visiting a bank).

b- Continuous variable:- a variable that can assume any numerical value over a certain interval is called continuous variable-

* Data Set:

A data set is a collection of observation on one or more variable.