27-09-2021

STATISTICS

→ **Population**

You are analysing — A collection of all the individuals (N).

individuals → Finite / Infinite

- Population کا مطلب یہاں آبادی نہیں ہے اس سے مراد [illegible] کی Population کی Strength ہے
جس پر ہم research کر رہے ہیں اس data کی [illegible]
ایک population [illegible] کی ہے

- Finite Polpulation (countable)
- Infinite Population (Uncountable).

Parameter

The quantity calculated from population is called its parameter.

Example: Averge of student which have GPA more than 3 GP.

INFERENTIAL STATISTICS.

Draw a conculusion about popul on the basis of sample evidance.
- Experiment on samples
- Sample camparison.

Making Comparison
Hypothesis Testing
Determing Cause & Effect
Making Prediction

A

Class Intervals

Example

$$\frac{\Sigma x}{n} = \frac{\text{Sum of all values}}{\text{Total no of values}}$$

Median = centeral value of given Data.

Mod : Most frequent Numbers.

Group Data

	f	x	fx
5 – 9	2	7	14
10 – 14	5	12	60
15 – 19	4	17	68
20 – 24	5	22	110
25 – 29	6	27	162
			414

Mean

18.8

$$\text{Mean} = \frac{\Sigma fx}{\Sigma f} = \frac{414}{22} = 18.8$$

Median

$$l + \left[\frac{n}{2} - CF\right] \times h = \frac{l + \left[\frac{n}{2} - CF\right] \times h}{f}$$

Class boundary	Class boundary	Camulative frequ
5 – 9	4.5 – 9.5	2
10 – 14	9.5 – 14.5	7
15 – 19	14.5 – 19.5	11
20 – 24	19.5 – 24.5	16
25 – 29	24.5 – 29.5	22

$n = \Sigma f$

$n = 22$

$\frac{n}{2} = 11$

$$l + \left[\frac{\frac{n}{2} - CF_p}{f}\right] \times h$$

CF = Comulative frequency

CF = 11

f = 4

h = difference between class interval

l = lower class boundary

$$= 14.5 + \left[\frac{11 - 7}{4}\right] \times 5$$

Median = 19.5

27-09-2022 (Dr. Balchtawar) Statistic

Descriptive Statistics

- Present our raw data
- Present the data in more
- Centeral tendency measurment
- Friquency distribution
- Measure of spread.
- Summerizing the our group

Design Criteria

1- complete
2- Plausible (easy to understand)
3- Homogenous

26-09-

Statistics

BASIC TERMS (Back Bone)

→ Population (Parameter)
→ Sample → Random sample
→ Representation Sample
→ Statistical Error* → Find the Error
→ Data → Primary data
→ Secondary data
→ Variable → Discrete Variable
→ continous variable.

Statistics

→ Organizing Data
→ collecting Data
→ Analysing Data
→ Interpreting data

① Math
② comparisons
③ Tools,