

RANGE

MARCH '2000

TUESDAY 21

APPOINTMENTS

- It is the simplest form of Scatter.
- It shows the distance between the smallest and largest observation.

It is not a good measure of dispersion as it depends only on two extreme observations but not on all variables.

$$R = H - L$$

where $R = \text{Range}$

$H = \text{Highest Variable}$

$L = \text{Lowest Variable}$

WORK TO DO

Merits of Range:-

- It is very easy to understand.
- It has a rigid definition.
- The method of calculation of range is very simple.
- It is used in solving different problems in everyday life.

PHONES

Limitations of Range

- changed on any change in extremes of the series.
- Any change in the series except extremes does not affect range.
- cannot be calculated when distribution has open end classes.
- The entire data is not taken into account in the range.
- Range is unable to explain the mode of distribution of values in relation to mean.

APRIL 2000
S M T W T F S S M T W T F S
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30

⇒ Uses of Range:-

- It is utilized in studying prices of some articles during particular period of the year.
- It is used in knowing variation.
- It is used in determining extreme conditions concerning rainfall, pressure, temperature etc.

WORK TO DO

Example:- In a test, conducted for admission in P. G. course in 1995, 15 selected students obtained following marks:-
430, 410, 425, 435, 438, 507,
458, 502, 495, 440, 430, 507,
432, 480 and 500.

Solution:-

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$$R = H - L$$

$$= 507 - 410$$

$$= 97$$