14.7 Range

The range is the difference between the highest and lowest scores of a distribution. It is the simplest measure of dispersion. It gives a rough idea of dispersion. This measure is useful for ungrouped data.

(a) Coefficient of the Range :

If ℓ and h are the lowest and highest scores in a distribution then the coefficient of the Range $= \frac{h-\ell}{h+\ell}$

Ex.14 Find the range of the following distribution : 1, 3, 4, 7, 9, 10, 12, 13, 14, 16 and 19.

Sol. $\ell = 1$, h = 19

$\therefore$ Range = h - ℓ = 19 - 1 = 18 **Ans.**

Ex.15 Find the range of the following frequency distribution :

Class – Interval	Frequency
0 – 5	6
5 – 10	8
10 – 15	12
15 – 20	5
20 - 25	4

Sol. The range is the difference between the mid value of the least class-interval and the greatest class interval.

Mid value of least class interval = $\frac{0+5}{2} = 2.5$

Mid value of greatest class interval = $\frac{20+25}{2} = 22.5$

$\therefore$ Range = 22.5 - 2.5 = 20 **Ans.**

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