

④ Measure of Spread :-

→ It is a kind of opposite to finding the Central point of our data. It is how much and how are data is spread out around its Center.

For ex:- It is really tight clustered around the Center, or is it scattered far away from the Center in an uneven, or unbalanced sort of way.

① Range :- To find range we have seen before we just have to Subtract the highest data point with Smallest data point.

Ex:- we have a golf game and there were different Scores. The highest score was 72 and lowest was 62.

$$\Rightarrow 72 - 62$$

Ex 2:- There are various heights of candidates in a class. The height of tallest student is 172 cm and shortest candidate is 162 cm.

$$\Rightarrow 172 - 162$$

So, range tells us the distribution of our data, how and in what range they are distributed.

→ So whatever the data is you just have to find the minimum and maximum point of our data and you will get the range by subtracting those points.

② Interquartile Range :- $[IQR]$

For understanding IQR we first have to understand quartiles because in IQR we are measuring the distance between one quarter and another quarter of our data.

Ex data :- 12, 12, 13, 14, 15, 17, 20, 20, 28, 29, 31, 35, 46, 46, 48, 51, 59, 60

→ Terminology :-

Q_1 = 25 Percentile

Q_2 = 50 percentile

Q_3 = 75 Percentile

Q_4 = 100 Percentile.

→ After finding the Percentile we get.

12, 12, 13, 14, 15, 17, 20, 20, 28, 29, 31, 35, 46, 46, 48, 59, 61

\downarrow \downarrow \downarrow

Q_1 Q_2 Q_3

→ Now to find the IQR you just have to Subtract Q_1 from Q_3 .

$$\Rightarrow 46 - 15$$

$$\Rightarrow 31$$

→ If IQR is low → Data is close to median

→ If IQR is high → Data is highly spread from center.

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