Statistics

* **Descriptive**　　　　　　　　　　* **Inferential**

① **Descriptive:-**

　　→ * Organizing and Summarizing date (numbers & graph)

　　→ * Data Summary (Bar Graph ___ etc)

　　→ * Measures of Central Tendency:- (mean - median - Mode)

　　→ * Measures of variability; (Range, variance, & S.D)

② **Inferential:-**

　　→ * Sample of data ⟶ to make inference or draw conclusion of population

　　→ * Use probability to determine how confident of the conclusion

Note:-

* The conclusion of Descriptive Statistic is Inferential Statistic

* Descriptive :- [mean - median -- mode]

① **Means** :- (متوسط)

$$mean = \frac{sum}{n}$$

* Example : 12, 7, 14, 5, 7, 11, 9

$$= \frac{12+7+14+5+7+11+9}{7} = 9,285$$

② **Median** :- [ترتب أزلاً]

median :-

* Example : 5, 7, 7, ⑨, 11, 12, 14

median

* if there 2 numbers we divide them by 2

③ **Mode** :- [أكثر رقم يتكرر]

mode = 7.

④ **Range** :-

Range = highest num - lowest num

$$= 14 - 5 = 11$$

*Descriptive:- (Percentiles, Quartiles, Quintiles & Deciles)

   ↳ all variations of the same thing

   ↳ Locating an observation

   ↳ They do not have to be an actual value

   ↳ Percentiles represent the number of values out of the total

* location formula → $L_p = \dfrac{P}{100}(n+1)$ ← percentile

                    number of observation

5 equal parts

Ⓕ **Quintiles and Deciles** ↝ 10 equal parts

• percentile value = lower location value + location decimal (upper − lower) = value

         number observations

• percentile of specific value = $\dfrac{X + 0.5y}{n}$ → the count