* Mid exam :-

* $\overline{X} = \dfrac{\Sigma X}{N}$ (Mean)

* W.mean $= \dfrac{w_1 \overline{X}_1 * w_2 \overline{X}_2 * w_3 \overline{X}_3 \cdots}{w_1 * w_2 * w_3 \cdots}$

* Median position $= \dfrac{n+1}{2}$

* Range $\Rightarrow$ (from - to) $\Rightarrow$ (to - from)   هون نقدر نطلع قيمة الـ range

طرح

* Pecentile value $= \dfrac{P}{100} * (n+1)$ th position.

* $\boxed{S^2} = \dfrac{\Sigma (X-\overline{X})^2}{n-1}$ (variance)

degree of freedom $\leftarrow$ $n-1$

* $\pm$ S.D $= \sqrt{\dfrac{\Sigma (X-\overline{X})^2}{n-1}}$

مهم جداً

* ± 1 S.D $\Rightarrow 68\%$ ⎫
* ± 2 SD $\Rightarrow 95\%$ ⎬ $\Rightarrow$ within
* ± 3 S.D $\Rightarrow 99\%$ ⎭

* ± 1 SD $\Rightarrow 32\%$ ⎫
* ± 2 S.D $\Rightarrow 5\%$ ⎬ $\Rightarrow$ more than S.D
* ± 3 S.D $\Rightarrow 1\%$ ⎭

* S.E = $\dfrac{S.D}{\sqrt{n}}$

* Population mean $(\mu) = \bar{x} \pm 2\,S.E$ * within 95% *

                       $= \bar{x} \pm 1.96\,S.E$

* population mean $(\mu) = \bar{x} \pm 3\,S.E$ * with in 99% *

                      $= \bar{x} \pm 2.58\,S.E$

* Systematic sampling $= N/n$ * عشان نطلع النمط كل قد ايش ؟

* Relative frequency $= \dfrac{\text{frequency each category}}{\text{total frequency}}$

       ↳ Percentage ⇒ Relative frequency * 100.