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Nombre del trabajo: RETROALIMENTACIÓN

Materia: ESTADÍSTICA DESCRIPTIVA

Grado: TERCER CUATRIMESTRE

Grupo: "A"

Frontera Comalapa, Chiapas a 2 de agosto de 2020.

clases	x	f	fr	F	X*f	(x-x) ²	f*(x-x) ²
115-120	117.5	5	35.71	5	587.5	45.97	229.85
120-125	122.5	3	21.43	8	367.5	3.17	9.51
125-130	127.5	2	14.29	10	255	10.37	20.74
130-135	132.5	4	28.57	14	530	67.57	270.28
Total		14			1740		530.38

$$\bar{X} = \frac{\sum X \cdot f}{N}$$

N

$$\bar{X} = \frac{1740}{14}$$

14

$$\bar{X} = 124.28$$

$$S^2 = \frac{\sum (X - \bar{X})^2 \cdot f}{n - 1}$$

n-1

$$S^2 = \frac{530.38}{13} = 40.79$$

13

$$S^2 = 40.79$$

$$Me = Li + \frac{N/2 - Fi_{-1}}{Fi} \cdot Ai$$

Fi

$$Me = 120 + \frac{7 - 5}{3} \cdot 5$$

3

$$Me = 120 + \frac{2}{3} \cdot 5$$

3

$$Me = 120 + 3.33 = \mathbf{Me = 123.33}$$

$$S = \sqrt{40.79}$$

$$s = 6.38$$

$$cv = \frac{s}{\bar{x}}$$

x

$$cv = \frac{6.38}{124.28}$$

124.28

$$cv = 0.05 \cdot 100 = 5$$

$$\mathbf{Cv = 5 \%}$$

$$Mo = Li + \frac{fi - fi_{-1}}{(fi - fi_{-1}) + (fi - fi_{+1})} \cdot Ai$$

(fi - fi₋₁) + (fi - fi₊₁)

$$Mo = 115 + \frac{5}{(5) + (5-3)} \cdot 5$$

(5)+(5-3)

$$Mo = 115 + \frac{5}{5+2} \cdot 5 = Mo = 115 + 25 / 7 = 3.57$$

5+2

$$Mo = 115 + 3.57 = 118.57$$

$$\mathbf{Mo = 118.57}$$

115-115-116-117-119-120-121-122-125-125-130-132-133-135

$$X = 115+115+116+117+119+120+121+122+125+125+130+132+133+135 = 1725 / 14 = 123.21$$

$$X = 123.21$$

$$Me = 121+122 = 121.5$$

$$Me = 121.5$$

$$Mo = 115, 125$$

$$Q_k = \frac{K \cdot n}{4} \quad Q_1 = \frac{1 \cdot 14}{4} = 3.5 \quad Q_1 = 116.5$$

$$D_k = \frac{K \cdot n}{10} \quad D_6 = \frac{6 \cdot 14}{10} = 8.4 \quad D_6 = 123.5$$

$$P_k = \frac{K \cdot n}{100} \quad P_{25} = \frac{25 \cdot 14}{100} = 3.5 \quad P_{25} = 116.5$$

$$S_2 = \frac{\sum (X - \bar{X})^2}{N}$$

$$S_2 = \frac{(115-123.21)^2 + (115-123.21)^2 + (116-123.21)^2 + (117-123.21)^2 + (119-123.21)^2 + (120-123.21)^2 + (121-123.21)^2 + (122-123.21)^2 + (125-123.21)^2 + (125-123.21)^2 + (130-123.21)^2 + (132-123.21)^2 + (133-123.21)^2 + (135-123.21)^2}{14}$$

$$S_2 = \frac{67.4+67.4+51.98+38.56+17.72+30.30+4.88+1.46+3.20+3.20+46.10+77.26+95.84+139}{14}$$

$$S_2 = 46.02$$

$$S = \sqrt{46.02}$$

$$S = 6.78$$

$$CV = \frac{S}{\bar{X}}$$

$$CV = \frac{6.78}{123.21} \quad CV = 0.05 \cdot 100 = 5 \quad CV = 5 \%$$