

INSTITUTO PRIVADO RAFAEL ARÉVALO MARTÍNEZ

IPRAM



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4to Perito en Admón. de Empresas

Catedra: Estadística

Catedrático: Josué Estrada

4TO BLOQUE

SEMANA No.8

Ciclo Escolar:

2,021

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4to. Admón. **Semana #8**

45 - 45 - 50 - 50 - 50 - 55 - 60 - 60 - 60 - 60 -
60 - 60 - 60 - 61 - 61 - 61 - 63 - 63 - 65 - 66 -
67 - 67 - 68 - 69 - 69 - 72 - 72 - 73 - 73 - 74 -
74 - 75 - 75 - 75 - 76 - 78 - 79 - 80 - 80 - 83 -
99

Puntajes obtenidos en un examen de Estudios Sociales por 41 alumnos.

$$K = 1 + 3.322 \log(n)$$

$$K = 1 + 3.322 \log(41)$$

$$K = 1 + 3.322 \cdot 1.6128$$

$$K = 1 + 5.3577$$

$$K = 6.35$$

$$R = D_{ma} - D_{me} + 1$$

$$R = 99 - 45 + 1$$

$$R = 54 + 1$$

$$R = 55$$

$$i = \frac{R}{K} = \frac{55}{6.35} = 8.66$$

$$i = 8$$

K	LA	Lvi	Lvs	Xs	F	Fa	FXS	d Xs - x̄	Fd	(Xs - x̄)²
1	45-52	44.5	52.5	48.5	5	5	242.5	17.56	87.8	308.35
2	53-60	52.5	60.5	56.5	8	13	452	9.56	26.48	91.39
3	61-68	60.5	68.5	64.5	10	23	645	1.56	15.6	2.43
4	69-76	68.5	76.5	72.5	12	35	870	6.44	21.28	41.47
5	77-84	76.5	84.5	80.5	5	40	402.5	14.44	42.2	208.51
6	85-92	84.5	92.5	88.5	0	40	0	22.44	0	503.55
7	93-100	92.5	100.5	96.5	1	41	96.5	30.44	30.44	926.59
					41		2,708.5		359.8	

$$\bar{X} = \frac{\sum FXS}{N}$$

$$\bar{X} = \frac{2,708.5}{41} = 66.06$$

LRDLR

$$F(Xs - \bar{X})^2$$

1541.75
1731.12
24.3
497.64
1092.55
0
926.59

4,763.95

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$$Md = Lri + \left(\frac{a/2 - f_{aq}}{f} \right) i$$

$$Md = 68.5 + \left(\frac{20.5 - 23}{12} \right) 8$$

$$Md = 68.5 + \left(\frac{-2.5}{12} \right) 8$$

$$Md = 68.5 + (0.21) 8$$

$$Md = 68.5 + 1.68$$

$$Md = 70.18$$

$$Mo = Lri + \left(\frac{\Delta 1}{\Delta 1 + \Delta 2} \right) i \quad \begin{array}{l} \Delta 1 = 12 - 10 = 2 \\ \Delta 2 = 12 - 5 = 7 \end{array}$$

$$Mo = 68.5 + \left(\frac{2}{2+7} \right) 8$$

$$Mo = 68.5 + \left(\frac{2}{9} \right) 8$$

$$Mo = 68.5 + (0.22) 8$$

$$Mo = 68.5 + 1.76$$

$$Mo = 70.26$$

LRDLR

$$DM = \frac{359.8}{41} = 8.78$$

$$S = \sqrt{\frac{4763.95}{41}}$$

$$S = \sqrt{116.19}$$

$$S = 10.78$$

$$V = \frac{s}{x} \times 100 \quad \text{Litzzy De León}$$

$$V = \frac{10.78}{66.06} \times 100 = 16.32\%$$

la media es bastante representativa.

$$Q1 = L_{ri} + \left(\frac{N/4 - f_{aq}}{f} \right) i \quad Q3 = L_{ri} + \left(\frac{3N/4 - f_{aq}}{f} \right) i$$

$$Q1 = 68.5 + \left(\frac{1025 - 23}{12} \right) 8 \quad Q3 = 76.5 + \left(\frac{30.75 - 35}{5} \right) 8$$

$$Q1 = 68.5 + \left(\frac{12.75}{12} \right) 8 \quad Q3 = 76.5 + \left(\frac{4.25}{5} \right) 8$$

$$Q1 = 68.5 + (1.06) 8 \quad Q3 = 76.5 + (0.85) 8$$

$$Q1 = 68.5 + 8.48 \quad Q3 = 76.5 + 6.80$$

$$Q1 = 76.98 \quad Q3 = 83.30$$

LRDLR

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$$D3 = Lvi + \left(\frac{N3/10}{f} - f_{99} \right) i \quad D7 = Lvi + \left(\frac{N3/10 - 109}{f} \right) i$$

$$D3 = 60.5 + \left(\frac{12.3 - 13}{10} \right) 8 \quad D7 = 68.5 + \left(\frac{12.3 - 23}{12} \right) 8$$

$$D3 = 60.5 + \left(\frac{0.7}{10} \right) 8 \quad D7 = 68.5 + \left(\frac{10.7}{12} \right) 8$$

$$D3 = 60.5 + (0.7) 8 \quad D7 = 68.5 + (0.89) 8$$

$$D3 = 60.5 + 0.56 \quad D7 = 68.5 + 4.12$$

$$D3 = 61.06 \quad D7 = 75.62$$

$$P75 = Lvi + \left(\frac{N75/100 - f_{99}}{f} \right) i \quad P90 = Lvi + \left(\frac{N90/100 - f_{99}}{f} \right) i$$

$$P75 = \left(\frac{41 \times 75}{100} \right) 8 \quad \text{LRDLR} \quad P90 = \left(\frac{41 \times 90}{100} \right) 8$$

$$P75 = 76.5 + \left(\frac{30.75 - 35}{5} \right) 8 \quad P90 = 84.5 + \left(\frac{36.9 - 10}{0} \right) 8$$

$$P75 = 76.5 + \left(\frac{4.25}{5} \right) 8 \quad P90 = 84.5 + \left(\frac{3.1}{0} \right) 8$$

$$P75 = 76.5 + (0.85) 8 \quad P90 = 84.5 + (3.1) 8$$

$$P75 = 76.5 + 6.8 \quad P90 = 84.5 + 24.8$$

$$P75 = 83.3 \quad P90 = 109.3$$