

UNIVERSIDAD DEL SURESTE



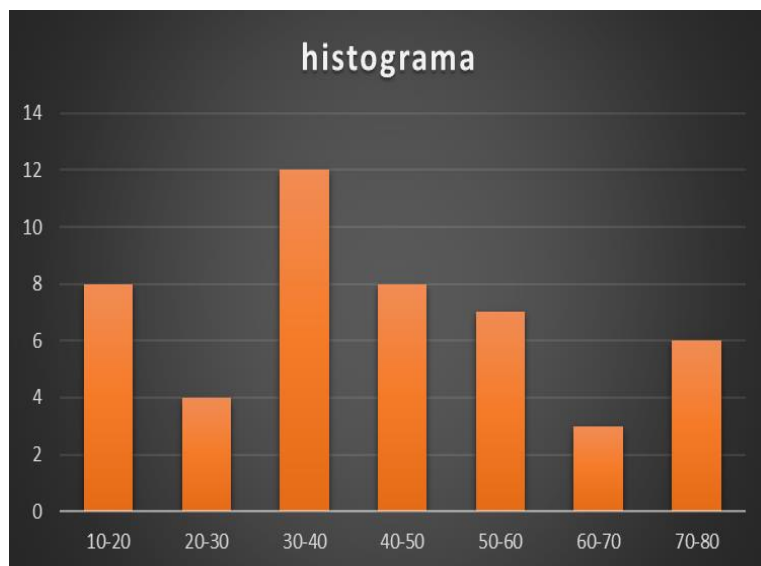
JORGE ENRIQUE ALBORES

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EJERCICIOS

PASIÓN POR EDUCAR

DATOS	Fi	F ac	mc	Fi.mc	fr	fir
10-20	8	8	15	120	0.1666666667	16.6666667
20-30	4	12	25	100	0.0833333333	8.33333333
30-40	12	24	35	420	0.25	25
40-50	8	32	45	360	0.1666666667	16.6666667
50-60	7	39	55	385	0.1458333333	14.58333333
60-70	3	42	65	195	0.0625	6.25
70-80	6	48	75	450	0.125	12.5
	N-48				FI/N	FI/N.100



PROMEDIO

$$\bar{x} = \sum \frac{MC \cdot f_a}{N} = \frac{120+100+420+360+385+195+450}{48} = \frac{2030}{48}$$

$$\bar{x} = \sum \frac{MC \cdot f_a}{N} = 42.29166667$$

MODA - Mo

$$L_i + \left(\frac{f_i + 1}{(f_i - 1) + (f_i + 1)} \right) \cdot ai$$

$$Mo = 30 + \left(\frac{8}{4+8} \right) \cdot 10 = 30 + 0.66666 \cdot 10 = 36.6666$$

PORCENTIL 70

$$P70 = \frac{N \cdot 70}{100} = \frac{48 \cdot 70}{100} = \frac{3360}{100} = 33.6 \leq fec$$

$$= L_i + \left(\frac{\frac{xn}{100} - (fec - 1)}{ti} \right) \cdot ai$$

$$50 + \frac{33.6 - 32}{7} \cdot 10 = 52.28$$

MEDIANA - M

$$L_i + \left(\frac{\frac{N}{2} - (fac - 1)}{fa} \right) \cdot ai$$

$$M = 30 + \frac{24 - 12}{12} \cdot 10 = 40$$

$$Q_3 = L_i = \left(\frac{Q_3 - (fec - 1)}{f_i} \right) \cdot ai$$

$$Q_3 = 50 + \left(\frac{36 - 32}{7} \right) \cdot 10$$

$$Q_3 = 50 + \left(\frac{4}{7} \right) \cdot 10$$

$$Q_3 = 50 + (0.5714) \cdot 10 = 55.71$$

$$\begin{aligned} Q3 &= N \cdot 75 / 100 \\ Q3 &= 48 \cdot 75 / 100 \\ Q3 &= 3600 / 100 \\ Q3 &= 36 \end{aligned}$$