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Nombre del profesor:

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Materia:

Estadística descriptiva

Grado

3er cuatrimestre

Grupo

A

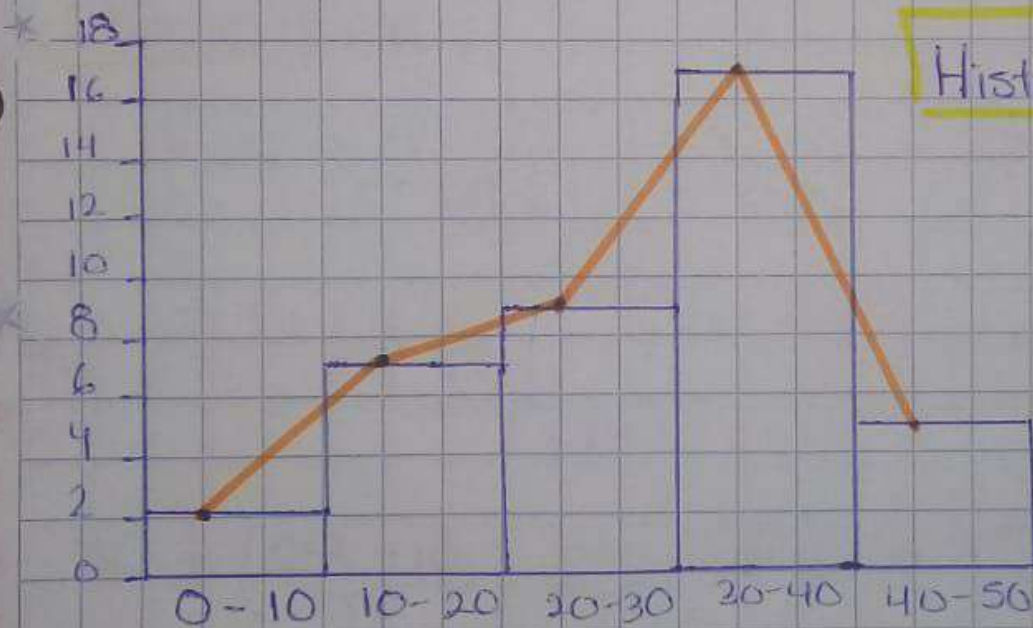
Los 40 alumnos de una clase han obtenido las siguientes puntuaciones sobre 50, en un examen de física

32, 35, 28, 38, 41, 48, 15, 32, 3, 15, 24, 28, 33, 35, 38,
42, 23, 38, 36, 34, 29, 25, 17, 7, 34, 36, 39, 44, 31, 26,
20, 11, 13, 22, 27, 47, 39, 37, 34, 13.

Datos	F_i	F_{ra}	Mc	$f_i \cdot Mc$	f_r	$f\%$
0-10	2	2	5	10	0.05	5%
10-20	7	9	15	105	0.175	17.5%
20-30	9	18	25	225	0.225	22.5%
30-40	17	35	35	595	0.425	42.5%
40-50	5	40	45	225	0.125	12.5%

$$N = 40$$

$$\frac{F_i \cdot 100}{n}$$



Histograma

Promedio

Promedio (\bar{x})

$$\bar{x} = \frac{\sum Mc \cdot f_i}{n} = \frac{10 + 105 + 225 + 595 + 225}{40} = \frac{1160}{40} = 29$$

Moda (Mo)

$$Li + \left(\frac{f_{i+1}}{(f_{i-1}) + (f_{i+1})} \right) \cdot ai$$

$$Mo = 30 + \left(\frac{5}{9+5} \right) \cdot 10 \\ = \underline{33,57}$$

Mediana (M)

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

$$M = 30 + \left(\frac{20 - 18}{17} \right) \cdot 10 = \underline{31,17}$$

* Percentual

$$P_{70} = \frac{n \cdot 70}{100} = \frac{40 \cdot 70}{100} = 28 = fac$$

$$= Li + \left(\frac{\frac{Xn}{100} - (fac-1)}{fk} \right) \cdot ai$$

$$30 + \left(\frac{28 - 18}{17} \right) \cdot 10 \quad P_{70} = \underline{35,88}$$

Tercer Cuartil

$$Q_3 = \frac{N \cdot 75}{100} = \frac{40 \cdot 75}{100} = 30 = fra$$

$$Q_3 = Li + \left(\frac{Q_3 - fra - 1}{fi} \right) \cdot ai$$

$$30 + \left(\frac{30 - 18}{17} \right) \cdot 10$$

$$Q_3 = \underline{37,05}$$