UNIVERSIDAD DEL SURESTE

Alumna: López Aguilar Andrea Candelaria

Maestra: Albores Jorge Enrique

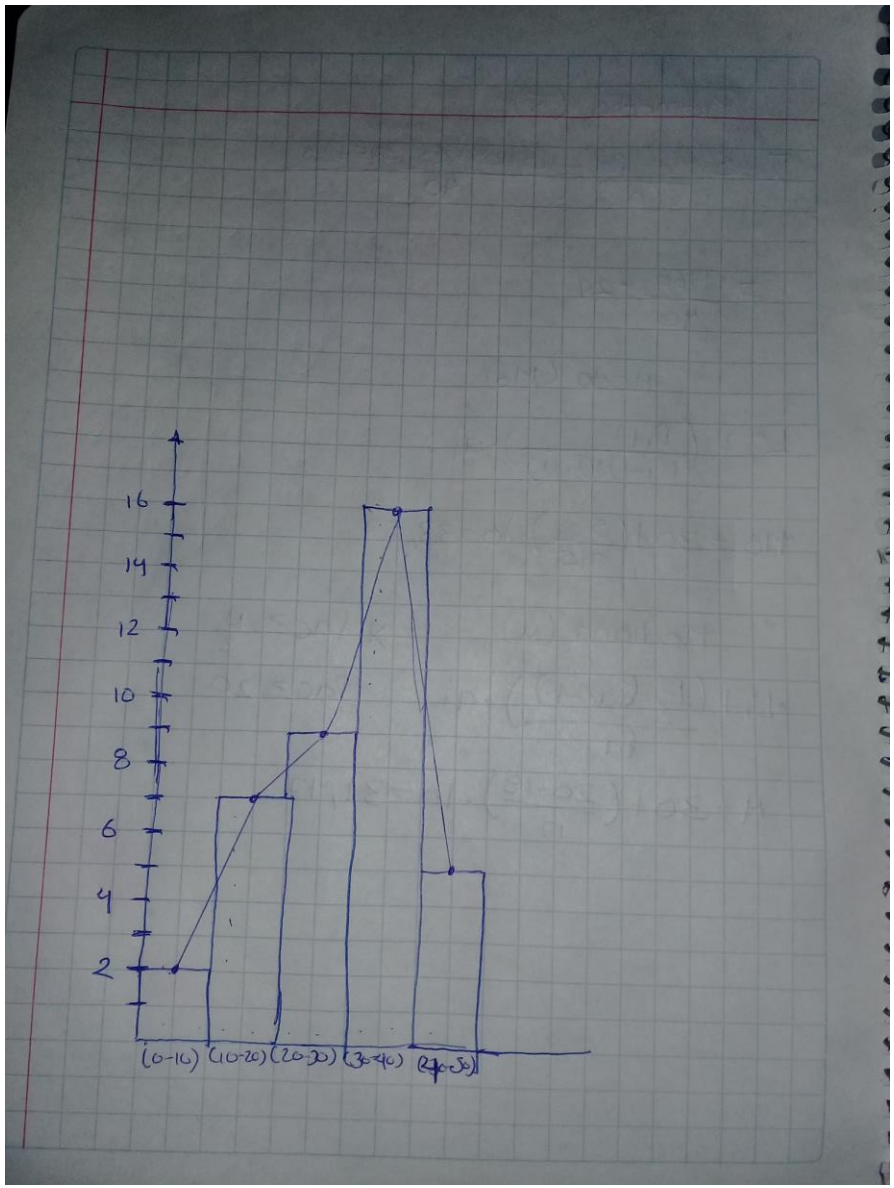
Materia: estadística descriptiva

Carrera: licenciatura en administración de empresas

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, 42, 38, 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	fi	fa	MC	fi·MC	fr	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				$\frac{fi}{n}$	$\frac{f_i \cdot 100}{n}$


16
14
12
10
8
6
4
2
(0-10)
(10-20)
(20-30)
(30-40)
(40-50)

Promedio ($\bar{x}$)

$$\bar{X} = \Sigma \frac{Mc \cdot fa}{n} = \frac{10+105+225+595+225}{40}$$

$$= \frac{1160}{40} = 29$$

Moda (M_o)

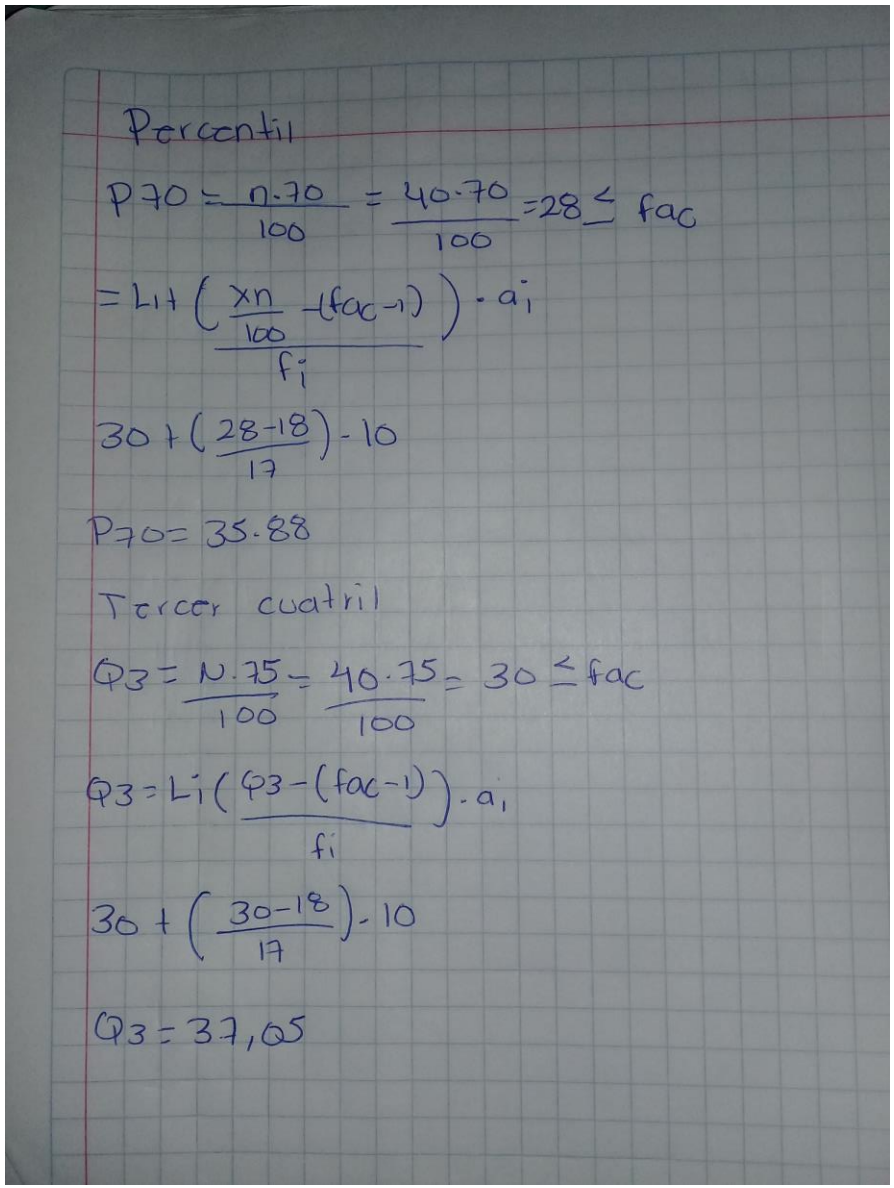
$$L_i^\circ + \left(\frac{f_{i+1}}{(f_{i-1})+(f_{i+1})}\right) \cdot a_i^\circ$$

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

Mediana (M) * $fac \geq \frac{N}{2}$

$$L_i^\circ + \left(\frac{\frac{N}{2} - (fac-1)}{fa}\right) \cdot a_i^\circ \qquad fac \geq 20$$

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


Percentil
P70 = n·70/100 = 40·70/100 = 28 ≤ fac
= Li + ((xn/100 − (fac−1))/fi) · ai
30 + ((28−18)/17) · 10
P70 = 35.88
Tercer cuatril
Q3 = N·75/100 = 40·75/100 = 30 ≤ fac
Q3 = Li ((Q3 − (fac−1))/fi) · ai
30 + ((30−18)/17) · 10
Q3 = 37,05