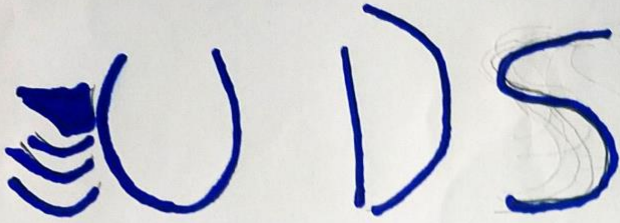


José Carlos Toledo Pérez



Universidad del Surco

Nombre del alumno: José Carlos Toledo Pérez

Nombre del Profesor: Jorge Enrique Albarca Aguilar

Materia: Álgebra Lineal

Grupo: A. Sabados

Licenciatura: Ingeniería en sistemas
computacionales

Cuatrimestre: 2

José Carlos Toledo Pérez

45	100	65	38	49	72	45	76
100	92	63	45	67	85	50	89
90	100	98	69	77	88	66	90
56	98	88	65	83	94	83	93
100	49	80	92	92	58	78	94
73	56	84	78	100	42	84	50
38	52	91	67	49	68	92	45
91	77	100	45	56	74	100	50

Rango $(100 - 38) + 1 = 63 = 9$

38-46	f_i	f_i
47-45	5	12.5
56-64	3	12.5
65-73	9	7.81
74-82	7	14.06
83-91	11	10.93
92-100	16	17.18
<u>2</u>	<u>64</u>	<u>2.5</u>

f_o	$\% f_o$	\bar{X}_i	$(f \cdot \bar{X}_i)$
8	12.5	42	336
16	25	51	408
21	32.81	60	300
30	46.87	69	671
37	57.81	78	546
48	75	87	457
64	100	96	1336
			<u>4704</u>

$\sum x_i$	$\sum f_i \cdot x_i$
1764	1412
2601	20288
3600	18000
4761	42849
6084	42583
7369	23259
9216	147456
	<u>369072</u>

moda

$$MO = Lit + \frac{f_i - f_{i-1}}{(f_i - f_{i-1}) + (f_i - f_{i+1})} \cdot a_i$$

$$MO = 92 + \frac{16 - 11}{(16 - 11) + (16 - 10)} \cdot 8 = 93.90$$

Cal

$$16 - 11 = 5 \cdot ((16 - 11) + (16 - 10)) = 8 = 192 =$$

media

$$\bar{x} = \frac{\sum f_i \cdot x_i}{n} = \frac{4704}{64} = 73.5$$

varianza

$$S^2 = 369,072 - \frac{(4704)^2}{64} = 370.28$$

mediana

$$Mc = Lit + \frac{\frac{n}{2} - f_{i-1}}{f_i} \cdot a_i$$

$$\frac{n}{2} = \frac{64}{2} = 32$$

$$Mc = 74 - \frac{32 - 30}{7} \cdot 8 = 76.28$$

$$S = 19.24$$

Cal

$$32 - 30 = 2 \cdot 7 = 14 = 174$$

79	75	71	79	71	44
38	56	79	42	68	45
70	40	75	41	53	54
78	42	66	45	64	52
55	57	73	56	41	64
38	67	79	46	46	38

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$$\text{Rango} = \frac{(79 - 38) \cdot 11}{6} = \frac{411}{6} = 7$$

	Fi	% Fi	Fia	% (i.a)	\bar{X}_i	$f \cdot \bar{X}_i$	\bar{X}_i^2
38-44	10	27.77	10	27.77	41	410	1,681
45-51	3	8.33	13	36.11	48	144	2,304
52-58	7	19.44	20	55.55	55	325	3,025
59-65	2	5.55	22	61.11	62	124	3,844
66-72	6	16.66	28	77.77	69	414	4,761
73-79	8	22.22	36	100	76	608	5,776
	<u>36</u>					<u>2,085</u>	

$$f \cdot \bar{X}_i^2$$

16,810
6,912
21,175
7,628
28,566
46,200
<u>127,359</u>

media

$$\frac{2,085}{36} = 57.91$$

media

$$\frac{n}{2} = \frac{36}{2} = 18$$

$$m_c = 52 + \frac{18 - 13}{7} \cdot 6 = 56.28$$

varianza

$$S^2 = \frac{127,359 - (2,085)^2}{36} = 188.65$$

$$S = 13.73$$