Nombre del Alumno

Sofía Yamileth Guillén Flores

Nombre del Maestro

Jorge Enrique Albores Aguilar

Nombre del Trabajo

Ejercicios

Materia

Probabilidad y Estadística

Grado

Quinto Cuatrimestre

Grupo

Único

Sofia Gallón Flores.

Rango

$$\frac{(No.\ mayor - No.\ menor)}{No.\ intervalo} + 1$$

$$\frac{(100 - 31)}{7} + 1 = \underline{10}$$

100	75	85	76	49	77	95	35
80	42	75	95	54	85	30	89
95	100	98	69	77	80	45	90
96	98	85	65	86	94	65	93
100	44	85	42	92	28	76	99
75	56	84	78	100	97	89	80
38	52	91	69	74	68	92	85
91	77	100	95	56	29	100	38

(7 intervalos)

$\Sigma f_i \bar{x}_i = 4552$

$\Sigma f_i \bar{x}_i^2 = 352536$

Intervalos	fi	%fi	fia	%fia	$\bar{x}_i$	$f_i \bar{x}_i$	$\bar{x}_i^2$	$f_i \bar{x}_i^2$
31 - 40	6	9.37	6	9.37	35.5	213	1260.25	7561.5
41 - 50	11	17.18	17	26.56	45.5	500.5	2070.25	22772.75
51 - 60	4	6.25	21	32.81	55.5	222	3080.25	12321
61 - 70	8	12.5	29	45.31	65.5	524	4290.25	34322
71 - 80	8	12.5	37	57.81	75.5	604	5700.25	45602
81 - 90	9	14.06	46	71.87	85.5	769.5	7310.25	65792.25
91 - 100	18	28.12	64	100	95.5	1719	9120.25	164164.5
	64					4552		352536

Media: $\dfrac{\Sigma f_i \bar{x}_i}{n}$

$\dfrac{4552}{64} = \underline{71.12}$

$S^2 = \dfrac{\Sigma f_i \bar{x}_i^2 - (\Sigma f_i \bar{x}_i)^2}{n-1}$

$S^2 = \dfrac{352536 - (4552)^2}{63}$

$S^2 = \underline{456.74}$

Mediana $= \dfrac{Li + \frac{n}{2} - fia_{-1} \cdot ai}{fi}$

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

$\dfrac{71 + 32 - 29}{8} \cdot 9 = \underline{74.375}$

$S = \underline{21.37}$

Moda $= \dfrac{Li + fi - fi_{-1} \cdot ai}{(fi - fi_{-1}) + (fi - fi_{+1})}$

$\dfrac{91 + 18 - 9}{(18-9) + (18-0)} \cdot 9 = \underline{-12869}$

90	41	71	79	71	44
45	56	79	42	88	45
70	41	75	41	53	54
78	42	66	45	64	58
55	56	73	56	42	64
45	67	79	49	90	45
90	87	80	85	90	84

(5 intervalos)

Rango =

$$\frac{(\text{No mayor} - \text{No menor})}{\text{No intervalo}} + 1$$

$$\frac{(90 - 41) + 1}{5} = 10$$

Intervalos	fi	%·fi	fia	%·fia	$\bar{x}i$	$fi\bar{x}i$	$\bar{x}i^2$	$fi\bar{x}i^2$
41 - 50	13	30.95%	13	30.95%	45.5	591.5	2,030.25	26,913.25
51 - 60	7	16.66%	20	47.61%	55.5	358.5	3080.25	21561.75
61 - 70	6	14.28%	26	61.90%	65.5	393	4290.25	25741.5
71 - 80	9	21.42%	35	83.33%	75.5	679.5	5700.25	51302.25
81 - 90	7	16.66%	42	100%	85.5	598.5	7310.25	51171.75
	42					2653	22451.25	176694.5

media: $\dfrac{\sum fi\bar{x}i}{n}$

$\dfrac{2653}{42} = \underline{63.16}$

mediana: $Li + \dfrac{\frac{n}{2} - fia_{-1}}{Fi} \cdot ai$

$\dfrac{16 + 21 - 20.9}{6} = \underline{27.5}$

moda: $\dfrac{Li + fi - fi-1}{(fi - fi-1) + (fi - fi+1)}$

$\dfrac{41 + 13 - 0}{(13-0) + (13-1)} \cdot 9 = \underline{47.15}$

$S^2 = \dfrac{\sum fi\bar{x}i^2 - (\sum fi\bar{x}i)^2}{n-1}$

$\dfrac{176694.5 - (2653)^2}{42} = 222.25$
$\dfrac{}{41}$

$\sqrt{222.25} = \underline{14.90}$