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**Nombre del trabajo: datos
agrupados**

Materia: estadística

Grado: 1°

Grupo: LPS19EMC0120-A

Ejercicio 1

21	30	50	20	40
30	49	25	50	47
29	46	34	48	25
20	33	49	40	33
31	39	43	43	35
28	23	20	44	20

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	f_i	% f_i	f_{ia}	% f_{ia}	\bar{x}_i	$f_i \bar{x}_i$	\bar{x}_i^2	$f_i \bar{x}_i^2$
20-25	6	20%	6	20%	22.5	135	506.25	3,037.5
25-30	4	13.33%	10	33.33%	27.5	110	756.25	3,025
30-35	6	20%	16	53.33%	32.5	195	1,056.25	6,337.5
35-40	2	6.66%	18	60%	37.5	75	1,406.25	2,812.5
40-45	5	16.66%	23	76.66%	42.5	212.5	1,806.25	9,031.25
45-50	7	23.33%	30	100%	47.5	332.5	2,256.25	15,793.75
						$\sum f_i \bar{x}_i = 1,060$		$\sum f_i \bar{x}_i^2 = 40,037.5$

$$\text{Rango} = \frac{50 - 20}{6} = 5$$

$$s^2 = \frac{40,037.5 - \frac{(1,060)^2}{30}}{29} = 89.10$$

$$\bar{x} = \frac{1,060}{30} = 35.33$$

$$s = 7,938.81$$

$$Me = 30 + \frac{15 - 10}{6} \cdot 5$$

$$Me = 34.16$$

$$MO = 45 + \frac{7 - 5}{(7 - 5) + (7 - 0)} \cdot 5 = 5$$

$$MO = 46.11$$

Ejercicio 2

38	56	80	42	68	45
70	40	75	41	53	54
78	42	66	45	64	58
55	56	73	56	41	64
38	67	79	49	44	80

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	f_i	$\%f_i$	f_{ia}	$\%f_{ia}$	\bar{x}_i	$f_i \bar{x}_i$	\bar{x}_i^2	$f_i \bar{x}_i^2$
38-44	7	23.33%	7	23.33%	41	287	1681	11767
44-50	4	13.33%	11	36.66%	47	188	2209	8836
50-56	3	10%	14	46.66%	53	159	2809	8427
56-62	4	13.33%	18	60%	59	236	3481	13924
62-68	4	13.33%	22	73.33%	65	260	4225	16900
68-74	3	10%	25	83.33%	71	213	5041	15123
74-80	5	16.66%	30	100%	77	385	5929	29645
						$\sum f_i \bar{x}_i = 1628$		$\sum f_i \bar{x}_i^2 = 104622$

$$\bar{x} = \frac{1628}{30} = 54.26$$

$$Me = 56 + \frac{15 - 14}{4} = 6$$

$$Mc = 57.5$$

$$Mo = 38 + \frac{7 - 0}{(7 - 0) + (7 - 4)} = 6 \quad Mo = 42.2$$

$$s^2 = \frac{104622 - \frac{(1628)^2}{30}}{29} = 561.23$$

$$s = 314,979.11$$