

Datos agrupados

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Estadística

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1º Ejercicio 1º

Media, Mediana, Moda, varianza y desviacion estandar

40	56	45	58	50	50
55	60	55	67	59	59
60	63	57	50	58	58
63	50	50	48	48	60
57	50	65	48	40	64
40	49	62	58	44	72
55	50	78	65	50	70
50	54	84	62	45	68

40	40	40	44	45	45
46	47	48	49	49	49
50	50	50	50	50	50
50	50	50	50	54	54
55	55	55	55	56	56
58	58	59	60	60	60
62	63	63	64	65	65
67	68	70	72	78	84

$$n = 48$$

$$\sum f_i = 2,658$$

$$\sum f_i^2 = 151,496$$

$$\bar{X} = \frac{\sum f_i}{n}$$

$$\bar{X} = \frac{2,658}{48}$$

$$\bar{X} = \underline{\underline{55.37}}$$

$$Me = \frac{n}{2}, \frac{n}{2} + 1$$

$$Me = \frac{48}{2}, \frac{48}{2} + 1$$

$$Me = 24, 25$$

$$Me = \frac{54 + 55}{2}$$

$$Me = \underline{\underline{54.5}}$$

$$S^2 = \frac{\sum f_i^2 - \frac{(\sum f_i)^2}{n}}{n-1}$$

$$S^2 = \frac{151,496 - \frac{(2,658)^2}{48}}{48-1}$$

$$S^2 = 151,496 - (2,658^2 \div 48) = 4,309.25 \div 47 = \underline{\underline{91.68}}$$

$$S = \sqrt{91.68}$$

$$S = \underline{\underline{9.57}}$$

Modal: 50

2º Ejercicio 2º

27	34	35	35	35	35	35	35
35	35	35	35	35	35	35	38
40	40	40	44	44	44	44	44
44	45	54	55	55	56	56	57
60	66	66	67	70	76	76	77
77	78	78	78	78	80	80	82
86	86	87	87	88	89	90	94
368	384	395	401	405	415	416	427

27	34	35	35	35	35	35	35
35	35	35	35	35	35	35	38
40	40	40	44	44	44	44	44
44	45	54	55	55	56	56	57
60	66	66	67	70	76	76	77
77	78	78	78	78	80	80	82
86	86	87	87	88	89	90	94
368	384	395	401	405	415	416	427

$$n = 56$$

$$ef_i = 3,211$$

$$ef_i^2 = 207,513$$

$$\bar{x} = \frac{ef_i}{n} \quad \bar{x} = \frac{3211}{56} \quad \bar{x} = \underline{\underline{57.3}}$$

$$Me = \frac{n}{2}, \frac{n}{2} + 1 \quad Me = \frac{56}{2}, \frac{56}{2} + 1 \quad Me = 28, 29 \quad Me = \frac{55 + 55}{2}$$

$$Me = \underline{\underline{55}}$$

$$S^2 = \frac{ef_i^2}{n-1} - \frac{(ef_i)^2}{n^2} \quad S^2 = \frac{207,513}{56-1} - \frac{(3211)^2}{56^2}$$

$$S^2 = 207,513 - \left(\frac{3211^2}{56} \right) = 23,396.55 \div 55 = \underline{\underline{425.39}}$$

$$S = \sqrt{425.39}$$

$$S = \underline{\underline{20}}$$

$$Moda = \underline{\underline{35}}$$