

UNIVERSIDAD DEL SURESTE

24/SEP/2021



Estadística

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Morales Aguilar

Primer Cuatrimestre "A"

Ejercicio 'uno'

Erika De Jesus Morales Aguilar
10/0ct/2021

40	56	45	56	50	50
55	60	55	67	49	59
60	63	54	50	55	58
63	50	50	46	48	60
47	50	65	49	40	64
40	49	62	58	44	72
55	50	79	65	50	70
50	54	84	62	45	65

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

mediana

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

$$55 + 55 = 110 \div 2 = 55 \quad \text{mediana } 55$$

media

$$40 + 40 + 40 + 44 + 45 + 45 + 46 + 47 + 48 + 49 + 49 + 49 + 50 + 50 + 50 + 50 + 50 + 50 + 50 + 54 + 54 + 55 + 55 + 55 + 55 + 56 + 56 + 58 + 58 + 59 + 60 + 60 + 60 + 62 + 62 + 63 + 63 + 64 + 65 + 65 + 67, 68, 70, 72, 78, 84 = 2670 \div 48 = 55.625$$

$$\text{media } 55.625$$

moda

50 es el valor que se repite más veces

Erika De Jesus morales

Aguilat 10/oct/2021

Varianza

$$s^2 = \frac{\sum (x - \bar{x})^2}{n}$$

$$\begin{aligned}(40 - 55.625)^2 &= 244.140625 \\ (41 - 55.625)^2 &= 135.140625 \\ (45 - 55.625)^2 &= 112.890625 \\ (46 - 55.625)^2 &= 92.640625 \\ (47 - 55.625)^2 &= 72.390625 \\ (48 - 55.625)^2 &= 58.140625 \\ (49 - 55.625)^2 &= 43.890625 \\ (50 - 55.625)^2 &= 31.640625 \\ (54 - 55.625)^2 &= 2.640625 \\ (55 - 55.625)^2 &= 0.429025 \\ (56 - 55.625)^2 &= 0.140625 \\ (58 - 55.625)^2 &= 5.640625 \\ (59 - 55.625)^2 &= 11.390625 \\ (60 - 55.625)^2 &= 14.140625 \\ (62 - 55.625)^2 &= 40.640625 \\ (63 - 55.625)^2 &= 54.390625 \\ (64 - 55.625)^2 &= 70.140625 \\ (65 - 55.625)^2 &= 87.890625 \\ (67 - 55.625)^2 &= 129.390625 \\ (69 - 55.625)^2 &= 153.140625 \\ (70 - 55.625)^2 &= 206.640625 \\ (72 - 55.625)^2 &= 268.140625 \\ (74 - 55.625)^2 &= 500.640625 \\ (74 - 55.625)^2 &= 500.640625\end{aligned}$$

$$\begin{aligned}244.140625 + 244.140625 + 244.140625 + 135.140625 + 112.890625 \\ + 112.890625 + 92.640625 + 72.390625 + 58.140625 \\ + 43.890625 + 43.890625 + 43.890625 + 31.640625 + 31.640625 \\ + 31.640625 + 31.640625 + 31.640625 + 31.640625 + 64.0625 \\ + 31.640625 + 31.640625 + 31.640625 + 2.640625 + 2.640625 + 0.429025 \\ + 0.429025 + 0.429025 + 0.429025 + 0.140625 + 0.140625 \\ + 5.640625 + 5.640625 + 11.390625 + 14.140625 + 14.140625 \\ + 14.140625 + 40.640625 + 40.640625 + 54.390625 + 54.390625 \\ + 70.140625 + 87.890625 + 87.890625 + 129.390625 + 153.140625 \\ + 206.640625 + 268.140625 + 500.640625 + 500.640625 = 4,306.4036 \div 48 = 89.7\end{aligned}$$

$$\text{Varianza} = 89.7$$

Desviación estándar

$$s^2 = 89.7$$

$$s = \sqrt{89.7} = 9.47$$

Ejercicio "Dos"

Erika de Jesus Morales Aguilera

10/oct/2021

22	40	44	35	34	57	35	38
35	42	35	44	44	55	47	45
40	35	60	79	35	78	35	56
78	44	66	76	55	54	48	67
35	35	76	49	80	86	44	77
44	40	82	35	66	44	35	75
56	85	35	70	77	90	90	35

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	79	78	78	78	80	80	82
85	86	87	87	88	89	90	94

media

$$\begin{aligned}
 & 27 + 34 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 + 35 \\
 & + 35 + 35 + 38 + 40 + 40 + 40 + 44 + 44 + 44 + 44 + 44 + 44 + 44 + 44 + 45 \\
 & + 54 + 55 + 55 + 56 + 56 + 57 + 60 + 66 + 66 + 67 + 70 + 76 + 76 \\
 & + 77 + 77 + 78 + 78 + 78 + 80 + 80 + 82 + 85 + 86 + 87 + 88 + 89 \\
 & + 90 + 94 = 3,211 \div 56 = 62.696
 \end{aligned}$$

media 62.7

mediana

$$\begin{aligned}
 & 27, 34, 35, 35, 35, 35, 35, 35, 35, 35, 35, 35, 35, 35, 35, \\
 & 35, 38, 40, 40, 40, 44, 44, 44, 44, 44, 44, 44, 45, 54, 55, 55, \\
 & 56, 56, 57, 60, 66, 66, 67, 70, 76, 76, 77, 77, 78, 78, 78, 78, \\
 & 80, 80, 82, 85, 86, 87, 87, 88, 89, 90, 94.
 \end{aligned}$$

$$55 + 55 = 110 \div 2 = 55$$

mediana 55

10/oct/2021

moda

35 es el valor que mas se repite mas veces

Varianza

$$s^2 = \frac{\sum (x - \bar{x})^2}{n}$$

$$\begin{aligned} (27 - 62.7)^2 &= 1,274.49 \\ (34 - 62.7)^2 &= 823.69 \\ (35 - 62.7)^2 &= 767.29 \\ (38 - 62.7)^2 &= 610.09 \\ (40 - 62.7)^2 &= 515.29 \\ (44 - 62.7)^2 &= 349.69 \\ (45 - 62.7)^2 &= 313.29 \\ (54 - 62.7)^2 &= 75.69 \\ (55 - 62.7)^2 &= 59.29 \\ (56 - 62.7)^2 &= 44.89 \\ (57 - 62.7)^2 &= 32.49 \\ (60 - 62.7)^2 &= 7.29 \\ (66 - 62.7)^2 &= 10.89 \\ (67 - 62.7)^2 &= 18.49 \\ (70 - 62.7)^2 &= 53.29 \\ (76 - 62.7)^2 &= 176.89 \\ (77 - 62.7)^2 &= 204.49 \\ (79 - 62.7)^2 &= 234.09 \\ (90 - 62.7)^2 &= 299.29 \\ (82 - 62.7)^2 &= 372.49 \\ (85 - 62.7)^2 &= 497.29 \\ (86 - 62.7)^2 &= 542.89 \\ (87 - 62.7)^2 &= 590.49 \\ (88 - 62.7)^2 &= 640.09 \\ (89 - 62.7)^2 &= 691.69 \\ (90 - 62.7)^2 &= 745.29 \\ (94 - 62.7)^2 &= 979.69 \end{aligned}$$

Exito de Jesus Morales Aguilar
10/oct/2021

$$\begin{aligned} & 1,274.49 + 423.69 + 767.29 + 767.29 + 767.29 + \\ & 767.29 + 767.29 + 767.29 + 767.29 + 767.29 + 767.29 \\ & + 767.29 + 767.29 + 767.29 + 767.29 + 767.29 + 610.09 + 515.29 + \\ & 515.29 + 515.29 + 349.69 + 349.69 + 349.69 + 349.69 + \\ & 349.69 + 349.69 + 313.29 + 75.69 + 44.89 + 44.89 + \\ & 32.49 + 7.29 + 10.89 + 10.89 + 18.49 + 53.29 + 176. \\ & 89 + 176.89 + 204.49 + 204.49 + 234.09 + 234.09 + 234. \\ & 09 + 234.09 + 299.29 + 299.29 + 372.49 + 497.29 + \\ & 542.89 + 590.49 + 590.49 + 640.09 + 691.69 + 745.29 + \\ & 745.29 + 979.69. = 25,628.78 \div 56 = 457.65 \end{aligned}$$

$$\text{Varianza} = \cancel{25} - 457.65$$

Desviación estandar

$$\sqrt{457.65} = 21.39$$