UNIVERSIDAD DEL SURESTE

15/oct/2021

ESTADISTICA

"Frecuencia simple"

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Primer cuatrimestre "A"

Erika De Jesus morales Aguilar
15 / oct / 2021

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	78	65	50	70

40	40	44	46	47	48
49	49	50	50	50	50
50	50	54	55	55	58
58	60	60	62	63	63
64	65	65	70	72	78

- mediana

40, 40, 44, 46, 47, 48, 49, 49, 50, 50, 50, 50, 50, 50, 54, 55, 55, 58,
58, 60, 60, 62, 63, 63, 64, 65, 65, 70, 72, 78.

$$54 + 55 = 109 \div 2 = 54.5$$
mediana 54.5

- media

$$40 + 40 + 44 + 46 + 47 + 48 + 49 + 50 + 50 + 50 + 50 + 50 + 50 + 54 + 55$$
$$+ 55 + 58 + 58 + 60 + 60 + 62 + 63 + 64 + 65 + 65 + 70 + 72 + 78.$$

$$1,638 \div 30 = 54.6$$

media 54.6

- moda

50 es el valor que se repite mas veces

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- Varianza

$$\sigma^2 = \varepsilon \frac{(x-\bar{x})^2}{n}$$

$$(40 - 54.6)^2 = 213.16$$
$$(44 - 54.6)^2 = 112.36$$
$$(46 - 54.6)^2 = 73.96$$
$$(47 - 54.6)^2 = 57.76$$
$$(48 - 54.6)^2 = 43.56$$
$$(49 - 54.6)^2 = 31.36$$
$$(50 - 54.6)^2 = 21.16$$
$$(54 - 54.6)^2 = 0.36$$
$$(55 - 54.6)^2 = 0.16$$
$$(58 - 54.6)^2 = 11.56$$
$$(60 - 54.6)^2 = 29.16$$
$$(62 - 54.6)^2 = 54.76$$
$$(63 - 54.6)^2 = 70.56$$
$$(64 - 54.6)^2 = 88.36$$
$$(65 - 54.6)^2 = 108.16$$
$$(70 - 54.6)^2 = 416.16$$
$$(72 - 54.6)^2 = 302.76$$
$$(78 - 54.6)^2 = 547.56$$

213.16 + 213.16 + 112.36 + 73.96 + 57.76 + 43.56 + 31.36 + 31.36 +

21.16 + 21.16 + 21.16 + 21.16 + 21.16 + 21.16 + 0.36 + 0.16 + 0.16 + 11.56 +

11.56 + 29.16 + 29.16 + 54.76 + 70.56 + 70.56 + 88.36 + 108.16 + 108.

16 + 416.16 + 302.76 + 547.56 = 2,752.8 ÷ 30 = 91.76

Varianza = 91.76

- Desviación estandar

$$\sigma = \sqrt{91.76} = 9.57$$

Desviación estandar = 9.57

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Ejercicio "Dos"

35	44	44	55	87	45
60	78	35	78	35	56
66	76	55	54	88	67
76	89	80	86	44	77
82	35	66	94	35	78
35	70	77	90	80	35

35	35	35	35	35	35
35	44	44	44	45	54
55	55	56	60	60	66
67	70	76	76	77	77
78	78	78	80	80	82
86	87	88	89	90	94

- mediana

35, 35, 35, 35, 35, 35, 35, 44, 44, 44, 45, 54, 55, 55, 56,
60, 60, 66, 67, 70, 76, 76, 77, 77, 78, 78, 78, 80, 80, 82,
86, 87, 88, 89, 90, 94.

$$66 + 67 = 133 \div 2 = 66.5$$

mediana 66.5

- media

$$35 + 35 + 35 + 35 + 35 + 35 + 35 + 44 + 44 + 44 + 45 + 54 +$$
$$55 + 55 + 56 + 60 + 60 + 66 + 67 + 70 + 76 + 76 + 77 + 77 +$$
$$78 + 78 + 80 + 80 + 82 + 86 + 87 + 88 + 89 + 90 + 94.$$

$$2,281 \div 36 = 63.361$$

media 63.361

- moda

35 es el valor que mas veces se repite

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- varianza

$$\sigma^2 = \mathcal{E} \frac{(x-X)^2}{n}$$

$(35-63.36)^2 = 804.2896$
$(44-63.36)^2 = 374.8096$
$(45-63.36)^2 = 337.0896$
$(54-63.36)^2 = 87.6096$
$(55-63.36)^2 = 69.8896$
$(56-63.36)^2 = 54.1696$
$(60-63.36)^2 = 11.2896$
$(66-63.36)^2 = 6.9696$
$(67-63.36)^2 = 13.2496$
$(70-63.36)^2 = 44.0896$
$(76-63.36)^2 = 159.7696$
$(77-63.36)^2 = 186.0496$
$(78-63.36)^2 = 214.3296$
$(80-63.36)^2 = 276.8896$
$(82-63.36)^2 = 347.4496$
$(86-63.36)^2 = 512.5696$
$(87-63.36)^2 = 558.8496$
$(88-63.36)^2 = 607.1296$
$(89-63.36)^2 = 657.4096$
$(90-63.36)^2 = 709.6896$
$(94-63.36)^2 = 938.8096$

$804.2896 + 804.2896 + 804.2896 + 804.2896 + 804.2896 + 804.2896 +$
$804.2896 + 374.8096 + 374.8096 + 374.8096 + 337.0896 + 87.6096 +$
$69.8896 + 69.8896 + 54.1696 + 11.2896 + 11.2896 + 6.9696 + 13.2496$
$+ 44.0896 + 159.7696 + 159.7696 + 186.0496 + 186.0496 + 214.3296 +$
$214.3296 + 214.3296 + 276.8896 + 276.8896 + 347.4496 + 512.$
$5696 + 558.8496 + 607.1296 + 657.4096 + 709.6896 + 938.8096 =$

$13,680.3056 \div 36 = 380.00848$

varianza 380.00848

- Desviación estandar

Desviación estandar
19.4938

$$\sigma = \sqrt{380.00848} = 19.4938$$