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Nombre del profesor: Jorge Enrique Albores Aguilar.

Nombre del trabajo: Ejercicios.

Materia: Estadística descriptiva en nutrición.

Grado: Tercer cuatrimestre.

Licenciatura: Nutrición.



Comitán de Domínguez Chiapas a 17 de Junio de 2020.

Datos

40	40	41	44	43
52	35	39	59	45
60	48	53	58	55
43	40	60	67	69
40	52	64	54	70
41	48	65	66	73

Resultados

Media: 52.13.

Mediana: 52.

Moda: 40.

Varianza: 124.05 u².

Desviación estándar: 11.13.

Procedimiento

Viviana Moreno Aguilar

MEDIA

$$\bar{x} = \frac{\sum x_i}{n}$$

$$\bar{x} = \frac{(40 \times 4) + (52 \times 2) + (60 \times 2) + (43 \times 2) + (41 \times 2) + 35 + 39 + 65 + 66 + 73 + 70 + 44 + 45 + 69 + 55 + 58 + (48 \times 2) + 53 + 59 + 59 + 64 + 67}{30}$$

$$\bar{x} = \frac{160 + 104 + 120 + 86 + 82 + 35 + 39 + 65 + 66 + 73 + 70 + 44 + 45 + 69 + 55 + 58 + 96 + 53 + 59 + 64 + 67}{30}$$

$$\bar{x} = \frac{1564}{30}$$

$$\bar{x} = 52.13 \text{ u}$$

— Orden —

$$\bar{x} = \frac{1564}{30}$$

$$\bar{x} = 52.13 \text{ u}$$

--- Orden ---

- | | | | | |
|------|------|------|------|------|
| ① 35 | ⑦ 41 | ⑬ 48 | ⑲ 55 | ⑳ 65 |
| ② 39 | ⑧ 41 | ⑭ 48 | ㉑ 58 | ㉒ 66 |
| ③ 40 | ⑨ 43 | ⑮ 52 | ㉓ 59 | ㉔ 67 |
| ④ 40 | ⑩ 43 | ⑯ 52 | ㉕ 60 | ㉕ 69 |
| ⑤ 40 | ⑪ 44 | ⑰ 53 | ㉖ 60 | ㉖ 70 |
| ⑥ 40 | ⑫ 45 | ⑱ 54 | ㉗ 64 | ㉗ 73 |

≡ Mediana ≡

$$Me = \frac{52 + 52}{2}$$

$$Me = \frac{104}{2}$$

$$Me = 52 \text{ u.}$$

$$Me = 52 \text{ u}$$

≡ Moda ≡

$$MO = 40 \text{ u.}$$

Viviana Moreno Aguilar.

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≡ Varianza y desviación estándar ≡

$$s^2 = \frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n-1}$$

$$s = \sqrt{\frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n-1}}$$

Datos:

- | | | |
|-------------------------------|-------------------------------|---------------|
| $35^2 = 1225$ | $53^2 = 2809$ | $67^2 = 4489$ |
| $39^2 = 1521$ | $54^2 = 2916$ | $69^2 = 4761$ |
| $40^2 = 1600 \times 4 = 6400$ | $55^2 = 3025$ | $70^2 = 4900$ |
| $41^2 = 1681 \times 2 = 3362$ | $58^2 = 3364$ | $73^2 = 5329$ |
| $43^2 = 1849 \times 2 = 3698$ | $59^2 = 3481$ | |
| $44^2 = 1936$ | $60^2 = 3600 \times 2 = 7200$ | |
| $45^2 = 2025$ | $64^2 = 4096$ | |
| $48^2 = 2304 \times 2 = 4608$ | $65^2 = 4225$ | |
| $52^2 = 2704 \times 2 = 5408$ | $66^2 = 4356$ | |

$$15^2 = 2025$$

$$48^2 = 2304 \times 2 = 4608$$

$$52^2 = 2704 \times 2 = 5408$$

$$50^2 = 2500 \times 2 = 5000$$

$$64^2 = 4096$$

$$65^2 = 4225$$

$$66^2 = 4356$$

$$S^2 = \left[(1225 + 1521 + 6400 + 3362 + 3698 + 1936 + 2025 + 4608 + 5408 + 2809 + 2916 + 3025 + 3364 + 3481 + 7200 + 4096 + 4225 + 4356 + 4489 + 4761 + 4900 + 5329) - \frac{(1564)^2}{30} \right] \div 30 - 1$$

$$S^2 = \frac{85,134 - \frac{(1564)^2}{30}}{30 - 1}$$

$$S^2 = \frac{85134 - \frac{2446096}{30}}{29}$$

$$S^2 = \frac{85134 - 81536.53}{29}$$

$$S^2 = \frac{3597.47}{29}$$

$$S^2 = 124.05$$

$$S = \sqrt{124.05}$$

$$S = 11.13$$

Varianza = 124.05

Desviación estándar = 11.13

Viviana Moreno Aguilar