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**Nombre del trabajo: Ejercicio datos no
agrupados.**

Materia: Bioestadística.

Grado: 4 Cuatrimestre.

Grupo: "A"

José Ángel Albores Sántiz

Ejercicio 1: Realice los cálculos de media, mediana, modo varianza, desviación estándar, para datos no agrupados.

| | | | | | |
|----|----|----|----|----|----|
| 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 | 78 | 65 | 50 | 70 |
| 50 | 54 | 84 | 62 | 45 | 68 |

Datos agrupados del ejercicio 1

| | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|
| $40^2 = 1600$ | $48^2 = 2304$ | $50^2 = 2500$ | $55^2 = 3025$ | $60^2 = 3600$ | $65^2 = 4225$ |
| $40^2 = 1600$ | $49^2 = 2401$ | $50^2 = 2500$ | $55^2 = 3025$ | $60^2 = 3600$ | $65^2 = 4225$ |
| $40^2 = 1600$ | $49^2 = 2401$ | $50^2 = 2500$ | $55^2 = 3025$ | $60^2 = 3600$ | $67^2 = 4489$ |
| $44^2 = 1936$ | $49^2 = 2401$ | $50^2 = 2500$ | $56^2 = 3136$ | $62^2 = 3844$ | $68^2 = 4624$ |
| $45^2 = 2025$ | $50^2 = 2500$ | $50^2 = 2500$ | $56^2 = 3136$ | $62^2 = 3844$ | $70^2 = 4900$ |
| $45^2 = 2025$ | $50^2 = 2500$ | $54^2 = 2916$ | $58^2 = 3364$ | $63^2 = 3969$ | $72^2 = 5184$ |
| $46^2 = 2116$ | $50^2 = 2500$ | $54^2 = 2916$ | $58^2 = 3364$ | $63^2 = 3969$ | $78^2 = 6084$ |
| $47^2 = 2209$ | $50^2 = 2500$ | $55^2 = 3025$ | $59^2 = 3481$ | $64^2 = 4096$ | $84^2 = 7056$ |

Media

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

$$\sum f_i x_i = 2670$$

$$\sum f_i^2 = 152,840$$

$$n = 48$$

$$\bar{x} = \frac{2670}{48} = \boxed{55.625}$$

Resultado

Mediana

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

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

$$24 + 1 = 25$$

$$\boxed{24, 25}$$

$$55, 55 = \frac{55 + 55}{2} = \frac{110}{2} = \boxed{55}$$

Resultado

| | |
|---|---|
| <p>Moda</p> <p>$M_0 = 50$</p> | <p>Varianza</p> $S^2 = \frac{\sum f_i^2}{n} - \frac{(\sum f_i)^2}{n^2}$ $S^2 = \frac{152,840}{48} - \frac{(2670)^2}{48^2}$ |
| <p>Desviación estándar</p> <p>$S = \sqrt{S^2}$</p> <p>$S = \sqrt{91.94} =$</p> <p>$\rightarrow = \boxed{9.58}$ Resultado</p> | <p>$152,840 - (2670^2 \div 48) =$</p> <p>$\rightarrow = \boxed{4,321.25}$</p> <p>$\rightarrow \frac{4,321.25}{47} = \boxed{91.94}$ Resultado</p> |

Ejercicio 2: Resuelva los siguientes ejercicios calculando media, mediana, moda, Varianza y desviación estándar.

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 27 | 40 | 44 | 35 | 34 | 57 | 35 | 38 |
| 35 | 87 | 35 | 44 | 44 | 55 | 87 | 45 |
| 40 | 35 | 60 | 78 | 35 | 78 | 35 | 56 |
| 78 | 44 | 66 | 76 | 55 | 54 | 88 | 67 |
| 35 | 35 | 76 | 89 | 80 | 86 | 44 | 77 |
| 44 | 40 | 82 | 35 | 66 | 94 | 35 | 78 |
| 56 | 85 | 35 | 70 | 77 | 90 | 80 | 35 |

Datos agregados del ejercicio 2.

| | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|
| $27^2 = 729$ | $35^2 = 1225$ | $44^2 = 1936$ | $56^2 = 3136$ | $77^2 = 5929$ | $87^2 = 7569$ |
| $34^2 = 1156$ | $35^2 = 1225$ | $44^2 = 1936$ | $57^2 = 3249$ | $78^2 = 6084$ | $87^2 = 7569$ |
| $35^2 = 1225$ | $35^2 = 1225$ | $44^2 = 1936$ | $60^2 = 3600$ | $78^2 = 6084$ | $88^2 = 7744$ |
| $35^2 = 1225$ | $35^2 = 1225$ | $44^2 = 1936$ | $66^2 = 4356$ | $78^2 = 6084$ | $89^2 = 7921$ |
| $35^2 = 1225$ | $35^2 = 1225$ | $44^2 = 1936$ | $66^2 = 4356$ | $78^2 = 6084$ | $90^2 = 8100$ |
| $35^2 = 1225$ | $35^2 = 1444$ | $45^2 = 2025$ | $67^2 = 4489$ | $80^2 = 6400$ | $94^2 = 8836$ |
| $35^2 = 1225$ | $40^2 = 1600$ | $54^2 = 2916$ | $70^2 = 4900$ | $80^2 = 6400$ | |
| $35^2 = 1225$ | $40^2 = 1600$ | $55^2 = 3025$ | $76^2 = 5776$ | $82^2 = 6724$ | |
| $35^2 = 1225$ | $40^2 = 1600$ | $55^2 = 3025$ | $76^2 = 5776$ | $85^2 = 7225$ | |
| $35^2 = 1225$ | $44^2 = 1936$ | $56^2 = 3136$ | $77^2 = 5929$ | $86^2 = 7396$ | |

Media
 $\bar{x} = \frac{\sum f_i}{n}$
 $\sum f_i = 3,211$
 $\sum f_i^2 = 207,513$
 $n = 56$ Resultado
 $\bar{x} = \frac{3211}{56} = 57.339$

Mediana
 $\frac{n}{2}, \frac{n}{2} + 1$
 $\frac{56}{2}, \frac{56}{2} + 1$
 $28 + 1 = 29$
 $28, 29$ Resultado
 $55, 55 = 55 + 55 = \frac{110}{2} = 55$

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Moda
Resultado
 $M_0 = \boxed{35}$

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

$$n - 1$$

Desviación
estándar

$$S^2 = 207,513 - \frac{(3,211)^2}{56}$$

$S = \sqrt{S^2}$

0,55

$S = \sqrt{425,39} \Rightarrow$

$207,513 - (3,211^2 \div 56) = \boxed{23,396,55}$

Resultado
 $\rightarrow \boxed{20,62}$

Resultado
 $23,396,55 \div 55 = \boxed{425,39}$

León Ángel Albores Sántiz

con los siguientes datos realice la tabla de frecuencia para datos no agrupados.

| | | | | | |
|----|----|----|----|----|----|
| 15 | 30 | 30 | 20 | 20 | 26 |
| 21 | 21 | 21 | 15 | 30 | 30 |
| 15 | 15 | 30 | 30 | 20 | 15 |
| 20 | 26 | 30 | 21 | 15 | 20 |
| 26 | 20 | 15 | 20 | 20 | 21 |
| 15 | 21 | 20 | 15 | 26 | 21 |

| Registro | f_c | f_r | % | F |
|------------|-------|-------|-----|----|
| 15 | 9 | 0.25 | 25 | 9 |
| 20 | 9 | 0.25 | 25 | 18 |
| 21 | 7 | 0.19 | 19 | 25 |
| 26 | 4 | 0.11 | 11 | 29 |
| 30 | 7 | 0.19 | 19 | 36 |
| Resultados | 36 | 0.99 | 99 | 36 |
| Redondeo | → | 1 | 100 | |

Obviamente que al final nos tiene que dar el número de datos que en este caso era 36 por eso nos dio 36.