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**Nombre del trabajo: Ejercicios**

**Materia: Fisiopatología**

**PASIÓN POR EDUCAR**

**Grado: 4° Cuatrimestre**

**Grupo:A**

## EJERCICIO 1

• Realizar los cálculos de media, mediana, modo, Varianza, desviación estándar, para datos no agrupados.

- 40 49 51 60 70
- 40 50 55 60 72
- 40 50 55 62 78
- 41 50 55 62 84
- 45 50 55 63
- 45 50 56 63
- 46 50 56 64
- 47 50 58 65
- 48 50 58 65
- 49 50 59 67
- 49 59 60 68

$$\bar{x} = \frac{\sum x_i}{N} = \frac{2049}{48} = 42.68$$

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

$$Mo = 50$$

$$S^2 = (40-42.68)^2(3) + (49-42.68)^2(1) + (51-42.68)^2(1) + (60-42.68)^2(2) + (70-42.68)^2(1) + (72-42.68)^2(1) + (78-42.68)^2(2) + (84-42.68)^2(1) + (45-42.68)^2(2) + (49-42.68)^2(1) + (50-42.68)^2(2) + (55-42.68)^2(4) + (60-42.68)^2(3) + (62-42.68)^2(2) + (63-42.68)^2(2) + (64-42.68)^2(1) + (65-42.68)^2(2) + (67-42.68)^2(1) + (68-42.68)^2(1) + (59-42.68)^2(1) + (59-42.68)^2(1) + (60-42.68)^2(1) + (65-42.68)^2(2) + (65-42.68)^2(1) + (70-42.68)^2(1) + (72-42.68)^2(1) + (78-42.68)^2(1) + (84-42.68)^2(1)$$

$$S^2 = \frac{21.5472 + 1.7424 + 10.7648 + 11.0224 + 18.6624 + 28.3024 + 119.8272 + 482.2416 + 256.2848 + 151.7824 + 354.8448 + 469.4048 + 266.3424 + 899.9472 + 746.5248 + 828.8048 + 454.5424 + 996.3648 + 643.1296 + 746.3824 + 859.6624 + 1247.5024 + 1707.3424}{48 - 1}$$

$$S^2 = \frac{92.04328 + 1839.3856 + 10643.784 + 3758.01904}{48 - 1} = \frac{16327.62328}{47}$$

$$S^2 = \frac{16327.62328}{47} = 347.39624$$

$$s = \sqrt{S^2} = \sqrt{347.39624} = 18.63856861$$

## EJERCICIO 2

- Calcular mediana, medio, modo, Varianza, desviación estandar.

27	35	44	66	80
84	35	44	66	80
35	35	44	67	82
35	35	45	70	85
35	38	64	76	86
35	40	55	76	87
35	40	55	77	87
35	40	56	77	88
35	41	56	78	89
35	41	56	78	90
35	44	57	78	94
35	44	60	78	94

$$\bar{x} = \frac{\sum x_i}{N} = \frac{7111}{54} = \underline{126.98}$$

$$Mo = \frac{55 + 55}{2} = \frac{110}{2} = \underline{55}$$

$$s^2 = (27-126.98)^2(1) + (34-126.98)^2(1) + (35-126.98)^2(6) + (38-126.98)^2(1) + (40-126.98)^2(2) + (44-126.98)^2(6) + (45-126.98)^2(2) + (46-126.98)^2(2) + (47-126.98)^2(1) + (50-126.98)^2(1) + (55-126.98)^2(2) + (56-126.98)^2(2) + (57-126.98)^2(1) + (60-126.98)^2(1) + (64-126.98)^2(1) + (66-126.98)^2(2) + (67-126.98)^2(1) + (70-126.98)^2(1) + (76-126.98)^2(2) + (77-126.98)^2(2) + (78-126.98)^2(1) + (80-126.98)^2(2) + (82-126.98)^2(1) + (85-126.98)^2(1) + (86-126.98)^2(1) + (87-126.98)^2(2) + (88-126.98)^2(1) + (89-126.98)^2(1) + (90-126.98)^2(1) + (94-126.98)^2(2)$$

56-1

$$s^2 = 14399.52 + 8645.2804 + 109984.1652 + 7917.4404 + 22696.5612 + 41314.0824 + 74482.5608 + 22696.5612 + 41314.0824 + 7437.2108 + 2597.6004 + 4486.3204 + 5197.9208 + 4996.0008 + 9596.1616 + 4414.2408 + 4046.4008 + 159.4404 + 1679.3604 + 1367.5204 + 1087.6804$$

56-1

$$s^2 = 1589195.447 + 187244.4976 + 27874.00406 + 12754.6432$$

56-1

$$s^2 = \frac{1805589.592}{55} = \underline{32828.90167}$$

$$\sigma = \sqrt{s^2} = \sqrt{32828.90167}$$

$$\sigma = \underline{181.1874766}$$

### EJERCICIO 3

- Realizar una tabla de frecuencias para datos no agrupados.

15 20 21 30  
 15 20 21 30  
 15 20 21 30  
 15 20 21 30  
 15 20 21 30  
 15 20 26 30  
 15 20 26  
 15 20 26  
 15 21 26  
 20 21 30

	$f_i$
15	9
20	7
21	4
26	7
30	7

	$f_{iA}$	$\% f_i$
15	9	25%
20	18	26%
21	25	19.44%
26	29	11.11%
30	36	19.44%

$\% f_{iA}$
25%
50%
69.44%
80.55%
100%

$9 \times 100 \div 36 = 25\%$   
 $18 \times 100 \div 36 = 26\%$   
 $25 \times 100 \div 36 = 19.44\%$   
 $29 \times 100 \div 36 = 11.11\%$   
 $36 \times 100 \div 36 = 19.44\%$