

UDS

ESTADISTICA

JORGE ENRIQUE ALBORES

ACTIVIDAD DE UNIDAD 2

"DATOS NO AGRUPADOS"

LICENCIATURA EN PSICOLOGIA

LÓPEZ GUILLÉN FATIMA ABIGAIL

GRUPO LPS 19 EMO 124-A

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

MEDIA DE LOS DATOS NO AGROPADO =

$$\bar{X} = \frac{\sum f_i}{n} \quad \bar{X} = \frac{2670}{48} = \bar{X} = 55.62$$

$$M_c = 55.62$$

$$f_1 = 2670$$

$$n = 48$$

$$f_1^2 = 152840$$

MEDIANA

$$55,55 = \frac{55+55}{2} = \frac{110}{2} = 55 \text{ MEDIANA}$$

MODA

EL NUMERO QUE MAS SE REPITE ES EL 50, CON LA CANTIDAD DE REPETICIONES DE 9 VECES

50 MODA

VARIANZA

$$\frac{152848 - \frac{(2670)^2}{48}}{47} = 97.94 \text{ VARIANZA}$$

ESTANDAR

$$\sqrt{97.94} = 9.58 \text{ DESVIACION ESTANDAR}$$

TABLA ORDENADA

EJERCICIO 4

X	f	F	fi
40	3	3	0.833
44	1	4	0.976
45	2	6	0.937
46	1	7	0.958
47	1	8	0.979
48	1	9	1
49	3	12	1.02
50	9	21	1.04
54	2	23	1.125
55	4	27	1.15
56	2	29	1.16
58	2	31	1.200
59	1	32	1.22
60	3	34	1.25
62	2	36	1.29
63	2	38	1.312
64	1	39	1.333
65	2	41	1.354
67	1	42	1.333
68	1	43	1.416
70	1	44	1.45
72	1	45	1.5
78	1	46	1.733
84	1	47	1.75

f = FRECUENCIA ABSOLUTA  
 F = FRECUENCIA ABSOLUTA ACOMULADA  
 fi = FRECUENCIA RELATIVA

LÓPEZ GUILLÉN FATIMA ABIGAIL

CALCULAR MEDIA

EJERCICIO ①

$x^2$   
 40 = 1600  
 55 = 3025  
 60 = 3600  
 63 = 3969  
 47 = 2209  
 40 = 1600  
 55 = 3025  
 50 = 2500  
 440 = 21,528

FORMULA

$$X = \frac{\sum f_i}{n}$$

$$X = \frac{440}{8}$$

$$X = 55.25$$

$$\sum f_i = 440$$

$$\sum f_i^2 = 21,528$$

$$n = 8$$

Media 1ª columna =

$$51.25$$

56 = 3,136  
 60 = 3600  
 63 = 3969  
 50 = 2500  
 50 = 2500  
 49 = 2401  
 50 = 2500  
 54 = 2916  
 432 = 23522

$$X = \frac{432}{8}$$

$$X = 54$$

$$\sum f_i = 432$$

$$\sum f_i^2 = 23522$$

$$n = 8$$

Media 2ª columna =

$$54$$

45 = 2025  
 55 = 3025  
 54 = 2916  
 50 = 2500  
 65 = 4225  
 62 = 3844  
 78 = 6084  
 84 = 7056  
 493 | 31675

$$X = \frac{493}{8}$$

$$X = 61.62$$

$$\sum f_i = 493$$

$$\sum f_i^2 = 31675$$

$$n = 8$$

Media 3ª columna =

$$61.625$$

LÓPEZ GUILLÉN FATIMA ABIGAIL

166.87

Ejercicio 6

56 = 3136  
 57 = 4489  
 59 = 2500  
 46 = 2116  
 40 = 2401  
 58 = 3364  
 65 = 4225  
 62 = 3844  
 453 | 26075

FORMULA  

$$x = \frac{\sum f_1}{n}$$

$$x = \frac{453}{8}$$

$$x = 56.62$$

$\sum f_1 = 453$   
 $\sum f_2 = 26075$   
 $n = 8$   
 Media 4ª columna  
56.62

50 = 2500  
 49 = 2401  
 55 = 3025  
 48 = 2304  
 40 = 1600  
 44 = 1936  
 50 = 2500  
 45 = 2025  
 381 | 18241

$$x = \frac{381}{8}$$

$$x = 47.62$$

$\sum f_1 = 381$   
 $\sum f_2 = 18241$   
 $n = 8$   
 Media 5ª columna  
 47.62

50 = 2500  
 59 = 3481  
 58 = 3364  
 60 = 3600  
 64 = 4096  
 72 = 5184  
 70 = 4900  
 68 = 4624  
 501 | 31741

$$x = \frac{501}{8}$$

$$x = 62.625$$

$\sum f_1 = 501$   
 $\sum f_2 = 31741$   
 $n = 8$   
 Media 6ª columna  
 62.62

2670 | 152840

166.86

SUMATORIA = 152840 =  
 TOTAL al cuadrado

suma total media = 333.73

# EJERCICIO ① 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

FORMULA =  $M_2 = \frac{n+1}{2}$  = IMPAR  $\frac{n}{2}$  ,  $\frac{n}{2} + 1$  par

$n = 48$

$\frac{n}{2} , \frac{n}{2} + 1 = \frac{48}{2} , \frac{48}{2} + 1 = 24, 25$

Mediana = 55, 55

$\frac{55 + 55}{2} = \frac{110}{2} = 55$  mediana

MODA	REPETICIÓN
40	3
44	1
45	2
46	1
47	1
48	1
49	3
50	4
54	2
55	4
56	2
58	2
59	1
60	3
62	2
63	2
64	1
65	2
67	1
68	1
70	1
72	1
78	1

MODA = 50

LÓPEZ, GUILLÉN FATIMA ABIGAIL

VARIANZA

FORMULA

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

$$s^2 = \frac{152848 - \frac{(2670)^2}{48}}{47}$$

$$s^2 = 91.94$$

DESVIACIÓN ESTANDAR

FORMULA

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

$$s = \sqrt{91.94}$$

$$s = 9.58$$

EJERCICIO 9

$$\sum f_i = 2670$$

$$\sum f_i^2 = 152840$$

$$n = 48$$

EJERCICIO 9

LÓPEZ GUILLEN FATIMA ABIGAIL

LÓPEZ GUILLÉN FATIMA ABIGAIL

EJERCICIO (2)

27	40	44	35	35	57	35	38	
35	87	35	44	44	55	87	45	
40	35	60	35	78	78	35	56	
78	44	66	55	76	54	88	77	
35	35	76	80	89	86	44	67	
44	40	82	66	35	94	35	78	
56	85	35	77	70	90	80	35	
T=	375	366	398	392	427	514	404	396

MEDIA DE LOS DATOS NO AGRUPADOS

57.35 Media

MEDIANA

55 MEDIA

MODA

35, EL NUMERO 35 SE REPITE 14 VECES

VARIANZA

$$s^2 = 394.833$$

DESVIACIÓN ESTÁNDAR

19.79



TABLA ORDENADA

EJERCICIO (2)

X	f	F	Fi
27	1	1	0.482
35	14	15	0.625
38	1	16	0.678
40	3	19	0.714
44	6	25	0.785
45	1	26	0.803
54	1	27	0.964
55	2	29	0.982
56	2	31	1
57	1	32	1.017
60	1	33	1.071
66	2	35	1.178
67	1	36	1.196
70	1	37	1.25
76	2	39	1.357
77	2	41	1.375
78	4	45	1.392
80	2	47	1.428
82	1	48	1.464
85	1	49	1.517
86	1	50	1.535
87	2	52	1.553
88	1	53	1.571
89	1	54	1.589
90	1	55	1.607
94	1	56	1.678

LÓPEZ GUILLÉN FATIMA ABIGAIL

EJERCICIO ①

27 = 329	40 = 1600	44 = 1936	35 = 1225
35 = 1225	87 = 7569	35 = 1225	44 = 1936
40 = 1600	35 = 1225	60 = 3600	35 = 1225
78 = 6084	44 = 1936	66 = 4356	55 = 3025
35 = 1225	35 = 1225	76 = 5776	80 = 6400
44 = 1936	40 = 1600	82 = 6724	66 = 4356
56 = 3136	85 = 7225	35 = 1225	77 = 5929
315	45935	398	24842
392	24096		

35 = 1225	57 = 3249	35 = 1225	38 = 1444
44 = 1936	55 = 3025	87 = 7569	95 = 2025
78 = 6084	78 = 6084	35 = 1225	56 = 3136
76 = 5776	54 = 2916	88 = 7744	77 = 5929
89 = 7921	86 = 7396	44 = 1936	67 = 4489
35 = 1225	94 = 8836	35 = 1225	<del>78</del> = 1225
70 = 4900	90 = 8100	80 = 6400	35 = 1225
427	29067	404	27324
514	39606	396	22536

Total = 3212

Total 2 = 205782

EJERCICIO ② CALCULAR MEDIANA

27, 35, 35, 35, 35, 35, 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, 46, 54, 55, 55, 56, 56, 57, 60, 66, 66, 67, 70, 76, 76, 77, 77, 77, 78, 78, 78, 78, 80, 80, 82, 85, 86, 87, 87, 88, 89, 90, 94,

n = 56

$$Me = \frac{n+1}{2}$$

$$Me = \frac{56+1}{2}$$

$$Me = 29$$

$$Me = 55$$

MEDIA

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

$$\bar{x} = \frac{3212}{56} = 57.35 \text{ media}$$

27	1	86	1
35	4	87	1
38	1	88	1
40	3	89	1
44	6	90	1
45	1	91	2
54	1	93	1
63	2	99	1
56	2	00	1
57	1	94	1
60	1		
66	2		
67	1		
70	1		
76	2		
77	2		

Mo = 35

VARIANZA

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

$$S^2 = \frac{205782 - (3212)^2}{56 - 1}$$

$\sum f_i^2 =$
205782
$\sum f_i =$
3212
$n =$
56

$$S^2 = 391.833$$

DESVIACIÓN ESTÁNDAR

$$s^2 = \sqrt{391.833}$$

$$s^2 = 19.79$$

DESVIACIÓN ESTÁNDAR

19.79