



# Mi Universidad

*Nombre del Alumno: JOSMAR ENRIQUE VELAZQUEZ VELAZQUEZ.*

*Nombre del tema: EJERCICIOS.*

*Parcial: I*

*Nombre de la Materia: ESTADISTICA DESCRIPTIVA.*

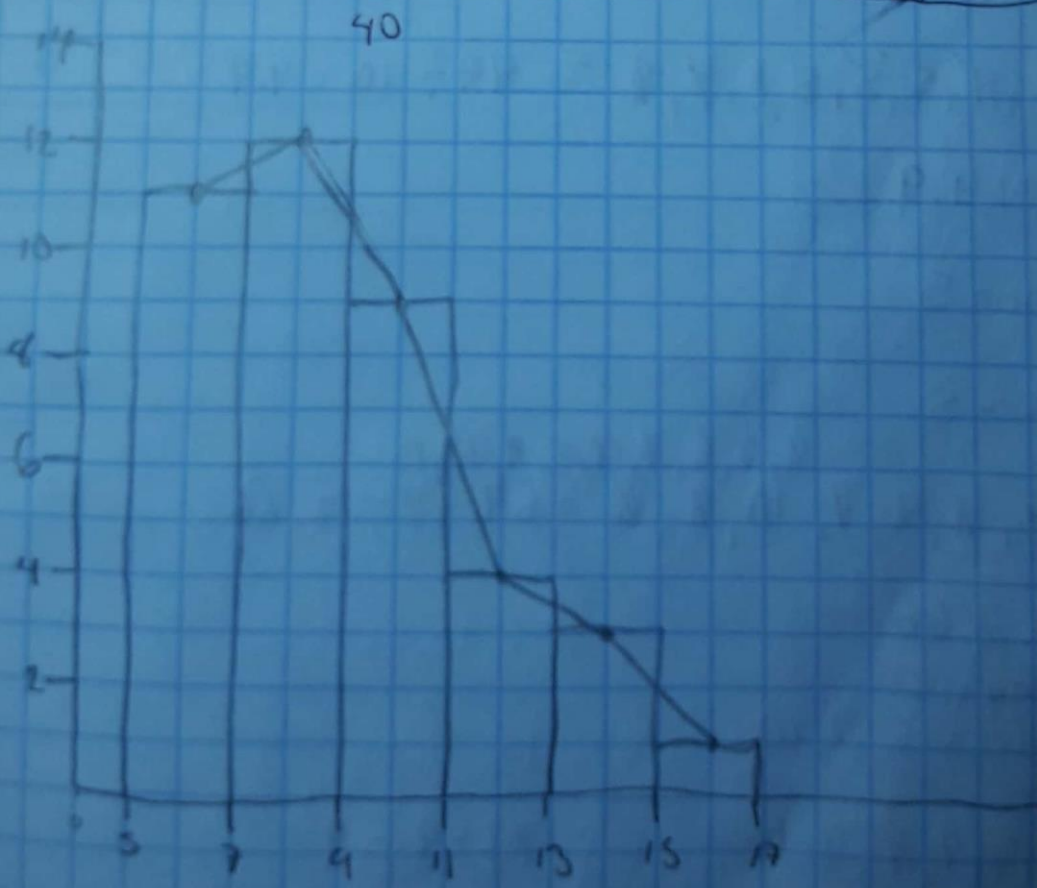
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*Nombre de la Licenciatura: PSICOLOGIA*

*Cuatrimestre: 2*

# JOSMOR

Numero de Autos	f	fr	F	X	fr y.
5-7	11	0.275	11	6	27.5%
7-9	12	0.3	23	8	30%
9-11	9	0.225	32	10	22.5%
11-13	4	0.1	36	12	10%
13-15	3	0.075	39	14	7.5%
15-17	1	0.025	40	16	2.5%



## Medidas de tendencia Central

A) 8, 11, 12, 15, 14, 7, 11, 9, 11

B) 2, 1, 5, 3, 4, 8, 9, 5, 7, 8

A = 7, 9, 9, 11, 11, 11, 11, 11, 18

$$48 \div 4 = 10.88$$

media = 10.88

mediana = 11

moda = 11

B) 1, 7, 7, 4, 5, 5, 8, 7, 4, 9 =  $49 \div 10 = 4.9$

media = 4.9

mediana = 5

moda = 5

C) 10, 8, 8, 4, 9, 7, 10, 9, 8 =  $69 \div 9 = 7.66$

media = 7.66

mediana = 8

moda = 6, 9, 10

D) 3, 8, 4, 8, 9, 9, 9, 18 =  $72 \div 8 = 9$

media = 9

mediana = 8.5

moda = 8, 9

## Ejercicio

X	f	F	X*f
44	1	1	44
45	4 <sup>mo</sup>	5	180
49	1	6 <sup>mo</sup>	49
53	1	7	53
54	1	8	54
55	2	10	110
56	1	11	56
57	1	12	57

total 12

$$\bar{X} = \frac{\sum x \cdot f}{n} = \frac{603}{12} = 50,25$$

$$M_e = \frac{n}{2} = \frac{12}{2} = 6$$

$$m_c = 49$$

$$\text{moda} = 45$$

## ejemplo

X	f	F	X*f
13	3	3	39
14	14	17	196
15	23 <sup>mo</sup>	40 <sup>mo</sup>	345
16	10	50	160
17	5	55	85
18	4	59	72
19	1	60	19
	60		916

$$\bar{X} = \frac{\sum x \cdot f}{n} = \frac{916}{60}$$

$$\bar{X} = 15,26 \text{ años}$$

$$M_e = 15 \text{ años}$$

$$m_o = 15 \text{ años}$$

# Varianza y desviación estándar

ejemplo

Peso en kg

52 55 58

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

$$\bar{x} = \frac{165}{3} = 55$$

$$s^2 = \frac{(52-55)^2 + (55-55)^2 + (58-55)^2}{2}$$

$$s^2 = \frac{9 + 0 + 9}{2} = 9 \text{ kg}$$

$$s = \sqrt{9} = 3 \text{ kg}$$

ejercicio

3, 3, 5, 5, 6, 6, 7

$$\frac{35}{7} = 5$$

formulas

$$\bar{x} = \frac{\sum x_i}{n-1}$$

$$s^2 = \frac{(3-5)^2 + (3-5)^2 + (5-5)^2 + (5-5)^2 + (6-5)^2 + (6-5)^2 + (7-5)^2}{6}$$

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

$$s^2 = \frac{4 + 4 + 0 + 0 + 1 + 1 + 4}{6}$$

$$s = \sqrt{s^2} \text{ desv. estándar}$$

$$s^2 = \frac{14}{6} = 2.3333 = \text{Varianza}$$

$$s = \sqrt{2.3333}$$

$$s = 1.5275 = \text{desv. estándar}$$