

Ordene los Datos.

45	45	50	50	50	55	60	60
60	60	60	60	60	61	61	61
63	63	65	66	67	67	68	69
69	72	72	73	73	74	74	75
75	75	76	78	79	80	80	83
99							

K

$$K = 1 + 3.322 \log(41)$$

$$K = 1 + 3.322 (1.61278)$$

$$K = 1 + 5.36$$

$$k = 6.36$$

R

$$R = 99 - 45 + 1$$

$$R = 54 + 1$$

$$R = \underline{\underline{55}}$$

i

$$i = 55 / 6.36$$

$$i = 8.65$$

$$\underline{\underline{i = 9}}$$

Puntos Obtenidos En Un Examen De Estudios Sociales Por 41 Alumnos

K	L - A	Lr	Lys	Xs	F	Fa	Fxs	(d)=(xs-x̄)	F(d)	(xs-x̄) ²	F(xs-x̄) ²	Fv	Grado	%
1	45-53	44.5	53.5	49	5	5	245	11.18	18.90	316.13	1,580.65	0.120	44	12.2
2	54-62	53.5	62.5	58	11	16	638	8.78	96.58	17.89	847.99	0.2683	97	26.83
3	63-71	62.5	71.5	67	9	25	603	0.22	1.98	0.45	0.45	0.2195	79	21.95
4	72-80	71.5	80.5	76	14	39	1,064	9.22	129.08	1,190.14	1,190.14	0.3415	123	34.15
5	81-89	80.5	89.5	85	1	40	85	18.22	18.22	331.91	317.97	0.0244	9	2.44
6	90-98	89.5	98.5	94	0	40	0	21.22	0	0	0	0	0	0
7	99-107	98.5	107.5	103	1	41	103	36.22	36.22	1,311.89	1,311.89	0.0144	9	2.44
								2,738.	370.98	5,263.09				

$$\bar{X} = \frac{2,738}{41} = 66.78$$

$$DM = \frac{370.98}{41} = 9.05$$

$$S = \sqrt{\frac{5,263.09}{41}} = \sqrt{128.37} = 11.33$$

$$V = \frac{11.33}{66.78} \times 100 = 16.97\%$$

"La media es bastante representativa"

Mediana

$$Md = 62.5 + \left(\frac{20.5 - 16}{9} \right) 9$$

$$Md = 62.5 + \left(\frac{4.5}{9} \right) 9$$

$$Md = 62.5 + (0.5) 9$$

$$Md = 62.5 + 4.5$$

$$Md = 67$$

Moda

$$Md = 71.5 + \left(\frac{5}{13+5} \right) 9$$

$$MO = 71.5 + \left(\frac{5}{18} \right) 9$$

$$MO = 71.5 + (0.28) 9$$

$$MO = 71.5 + 2.52$$

$$MO = 74.02$$

$$\Delta F = 14 - 9 = 5$$

$$\Delta Z = 14 - 1 = 13$$

cuartiles

$$Q1 = 53.5 + \frac{(10.25 - 5)}{11} 9$$

$$Q1 = 53.5 + \frac{(5.25)}{11} 9$$

$$Q1 = 53.5 + (0.48) 9$$

$$Q1 = 53.5 + 4.32$$

$$Q1 = 57.82$$

$$Q3 = 71.5 + \frac{(30.75 - 25)}{14} 9$$

$$Q3 = 71.5 + \frac{(5.75)}{14} 9$$

$$Q3 = 71.5 + (0.41) 9$$

$$Q3 = 71.5 + 3.69$$

$$Q3 = 75.19$$

Deciles

$$D3 = 53.5 + \frac{(12.3 - 5)}{11} 9$$

$$D3 = 53.5 + \frac{(7.3)}{11} 9$$

$$D3 = 53.5 + (0.66) 9$$

$$D3 = 53.5 + 5.94$$

$$D3 = 59.44$$

$$D7 = 71.5 + \left(\frac{28.7 - 25}{14} \right) 9$$

$$D7 = 71.5 + (0.26) 9$$

$$D7 = 71.5 + \left(\frac{3.7}{14} \right) 9$$

$$D7 = 71.5 + 2.34$$

$$D7 = 73.84$$

Percentiles

$$P90 = 71.5 + \left(\frac{36.9 - 25}{14} \right) 9$$

$$P90 = 71.5 + \left(\frac{11.9}{14} \right) 9$$

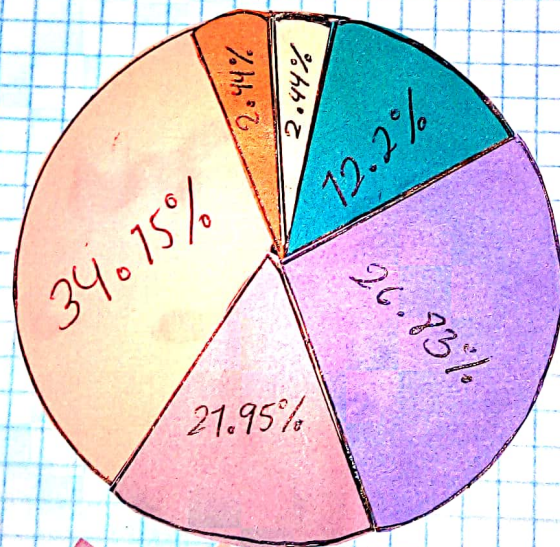
$$P90 = 71.5 + (0.85) 9$$

$$P90 = 71.5 + 7.65$$

$$P90 = 79.15$$

Diagrama de Sectores.

Puntcos Obtenidos en Un Exámen De Estudios Sociales Por 41 Alumnos.



49



58



67



76



85

94



103