

Actividad No. 8

Puntajes obtenidos en un examen de Estudios Sociales por 41 alumnos

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

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

$$K = 6.36$$

$$R = 99 - 45 + 1$$

$$R = 55$$

$$i = \frac{55}{6.36} = 8.65$$

$$i = 9$$

L.A.	F	Xs	Lr	i	Lrs	Fxs	Fr	grados	%	Fa
45 - 53	5	49	44.5	53.5	245	0.122	20	44	12.20	5
54 - 62	14	58	53.5	62.5	638	0.268	33	97	26.83	16
63 - 71	9	67	62.5	71.5	603	0.219	55	79	21.95	25
72 - 80	14	76	71.5	80.5	1064	0.341	59	123	34.15	39
81 - 89	1	85	80.5	89.5	85	0.024	4	9	2.44	40
90 - 98	0	94	89.5	98.5	0	-	-	0	-	40
99 - 107	1	103	98.5	107.5	103	0.024	4	9	2.44	41

$ d = x_s - \bar{x} $	F/d	$(x_s - \bar{x})^2$	F(x_s - \bar{x})^2
17.78	88.90	314.13	1,580.65
8.78	96.58	77.09	847.99
0.22	1.98	0.05	0.45
9.22	129.08	85.01	1,190.14
18.22	18.22	331.97	331.97
27.22	0	740.93	-
36.22	36.22	1,311.89	1,311.89
	370.98		5,263.09

$$Q_1 = 53.5 + \frac{(10.25 - 5)}{9} 9$$

$$Q_1 = 57.82$$

$$Q_3 = 71.5 + \frac{(30.75 - 25)}{14} 9$$

$$Q_3 = 75.20$$

$$\bar{x} = 66,78$$

$$M = 67$$

$$M_0 = 74,02$$

9

%
100,01

grados
361

67

$$D3 = 53.5 + \frac{(12.30 - 5) \cdot 9}{11}$$

$$D7 = 71.5 + \frac{(28.70 - 25) \cdot 9}{14}$$

$$P_{X75} = 71.5 + \frac{(30.75 - 25) \cdot 9}{14}$$

$$P_{X90} = 80.5 + \frac{(36.90 - 36) \cdot 9}{1}$$

$$D.M = \frac{\sum f \cdot x}{N} = \frac{\sum F \cdot d}{N} = \frac{370.81}{41} = D.M = 9.04$$

$$S = \sqrt{\frac{\sum F(x - \bar{x})^2}{N}} = \sqrt{\frac{5,243.09}{41} \cdot \frac{128.37}{41}} = S = 11.33$$

$$V = \frac{S}{\bar{x}} \times 100 = \frac{11.33}{66.78} \times 100$$

$$V = 16.97\%$$

La media es bastante representativa

