

Act 8

Agregue las columnas que hacen falta y calcule lo siguiente.

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

Ordenar

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									

$$k = 1 + 3.322 (\log n)$$

$$k = 1 + 3.322 \cdot 1.61278$$

$$k = 3.322 \times 1.61278 = 5.36$$

$$k = 1 + 5.36$$

$$k = 6.36$$

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$$R = Dma - Dme$$

$$R = 99 - 45$$

$$R = 54 + 1$$

$$R = 55$$

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

$$R11^{\circ} = 9$$

K	A	Lri	Lrs	Xs	f	fd	fxs
1	45 - 53	44.5	53.5	49	5	5	245
2	54 - 62	53.5	62.5	58	11	16	638
3	63 - 71	62.5	71.5	67	9	25	603
4	72 - 80	71.5	80.5	76	14	39	1064
5	81 - 89	80.5	89.5	85	1	40	85
6	90 - 98	89.5	98.5	94	0	40	0
7	99 - 107	98.5	107.5	103	1	41	103

2,738

$$\bar{X} = \frac{\sum fxs}{N}$$

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

$$Md = L_{ri} + \left(\frac{n/2 - f_{ag}}{f} \right) i$$

$$\frac{41}{2} = 20.5$$

$$Md = 62.5 + \left(\frac{20.5 - 10}{9} \right) 9$$

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

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

$$Md = 62.5 + 4.5$$

$$Md = 67$$

$$M0 = L_{ri} + \left(\frac{\Delta_1}{\Delta_1 + \Delta_2} \right) i$$

$$\Delta = 14 - 9 = 5 \quad \Delta_2 = 14 - 1 = 13$$

$$M0 = 71.5 + \left(\frac{5}{5 + 13} \right) 9$$

$$M0 = 71.5 + \left(\frac{5}{18} \right) 9$$

$$M0 = 71.5 + (0.28) 9$$

$$M0 = 71.5 + 2.52$$

$$M0 = 74.02$$

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$$Q_1 = \text{Lr} + \left(\frac{N/4 - f_{aa}}{f} \right) i$$

$$\frac{41}{4} = 10.25$$

$$Q = 53.5 + \left(\frac{10.25 - 5}{11} \right) 9$$

$$Q_1 = 53.5 + \left(\frac{5.25}{11} \right) 9$$

$$Q_1 = 53.5 + (0.48) 9$$

$$Q_1 = 53.5 + 4.32$$

$$Q_1 = 57.82$$

$$Q_3 = \text{Lr} + \left(\frac{\frac{3N}{4} - f_{aa}}{f} \right) i$$

$$\frac{3 \times 41}{4} = 30.75$$

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

$$Q_3 = 71.5 + \left(\frac{5.75}{14} \right) 9$$

$$Q_3 = 71.5 + (0.41) 9$$

$$Q_3 = 71.5 + 3.69$$

$$Q_3 = 75.19$$

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$$D_3 = Lr_i + \left(\frac{\frac{N_3}{10} - f_{aa}}{f} \right) i$$

$$\frac{41 \times 3}{10} = 12.3$$

$$D_3 = 53.5 + \left(\frac{12.3 - 5}{11} \right) 9$$

$$D_3 = 53.5 + \left(\frac{7.3}{11} \right) 9$$

$$D_3 = 53.5 + (0.66) 9$$

$$D_3 = 53.5 + 5.94$$

$$D_3 = 59.44$$

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$$D_7 = Lr_i + \left(\frac{\frac{N_7}{10} - f_{aa}}{f} \right) i$$

$$\frac{41 \times 7}{10} = 28.7$$

$$D_7 = 71.5 + \left(\frac{28.7 - 25}{14} \right) 9$$

$$D_7 = 71.5 + \left(\frac{3.7}{14} \right) 9$$

$$D_7 = 71.5 + (0.26) 9$$

$$D_7 = 71.5 + 2.34$$

$$D_7 = 73.84$$

$$P_{75} = l_{ri} + \left(\frac{\frac{NX}{100} - f_{aa}}{f} \right) i$$

$$\frac{41 \times 75}{100} = 30.75$$

$$P_{70} = 71.5 + \left(\frac{30.75 - 25}{14} \right) q$$

$$P_{75} = 71.5 + \left(\frac{5.75}{14} \right) q$$

$$P_{75} = 71.5 + (0.41)q$$

$$P_{75} = 71.5 + 3.69$$

$$P_{75} = 75.19$$

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$$P_{90} = l_{ri} + \left(\frac{\frac{NX}{100} - f_{aa}}{f} \right) i$$

$$\frac{41 \times 90}{100} = 36.9$$

$$P_{90} = 71.5 + \left(\frac{36.9 - 25}{14} \right) q$$

$$P_{90} = 71.5 + \left(\frac{11.9}{14} \right) q$$

$$P_{90} = 71.5 + (0.85)q$$

$$P_{90} = 71.5 + 7.65$$

$$P_{90} = 79.15$$

X	f	xs	fxs	d	f d	(xs - $\bar{x}$) ²	f(xs - $\bar{x}$) ²
45 - 53	5	49	245	17.78	88.9	316.15	1,580.65
54 - 62	11	58	638	8.78	96.58	77.09	847.99
63 - 71	9	67	603	0.22	1.98	0.05	0.45
72 - 80	14	76	1064	9.22	129.08	85.01	1,190.14
81 - 89	18	85	1530	18.22	327.96	331.97	3,311.97
90 - 98	0	94	0	27.22	0	740.93	0
99 - 107	1	103	103	36.22	36.22	1,311.89	1,311.89
					370.98		5,263.09

$$\bar{X} = \frac{2738}{41} = 66.78$$

$$D.M. = \frac{370.98}{41} = 9.05$$

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

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

la media es bastante representativa.

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wendy verásquez solo

X	XS	f	fr	Grados	%	Lri	Lrs
45-53	49	5	0.1210	44	12.2	44.5	53.5
54-62	58	11	0.2683	97	26.83	53.5	62.5
63-71	67	9	0.2195	79	21.95	62.5	71.5
72-80	76	14	0.3415	123	34.15	71.5	80.5
81-89	85	1	0.0244	9	2.44	80.5	89.5
90-98	94	0	0	0	0	89.5	98.5
99-107	103	1	0.0244	9	2.44	98.5	107.5

