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Curso:

Estadística

Grado:

6to. Perito Contador

Ciclo Escolar:

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Actividad No. 8

Actividad #8

Instrucciones Realice lo que se le pide

1. Ordene los datos.

Puntos de 25 alumnos en un examen de Contabilidad de Sociedades

49 55 65 66 66 70 72 72 72

74 75 75 76 76 77 78 79 80

81 81 81 81 83 84 90

2. K.

$$h = 1 + 3.322 \log 25$$

$$h = 1 + 3.322 (1.39794)$$

$$h = 1 + 4.64$$

$$h = 5.64$$

$$R = 90 - 49 + 1$$

$$R = 47 + 1$$

$$R = 42$$

$$i = \frac{R}{h} = \frac{42}{5.64} = 7.45$$

$$i = 7$$

Tabla con intervalo
Puntajes de 25 alumnos en un examen de
Contabilidad de Sociedades

K	LA	Lri	Lrs	XS	F	Fa	Fxs
1	49-55	48.5	55.5	52	2	2	104
2	56-62	55.5	62.5	59	0	2	0
3	63-69	62.5	69.5	66	3	5	198
4	70-76	69.5	76.5	73	9	14	657
5	77-83	76.5	83.5	80	9	23	720
6	84-90	83.5	90.5	87	2	25	174
							1853

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

$$\bar{X} = \frac{1853}{25} = 74.12$$

Mediana

$$Md = Lri + \left(\frac{\frac{N}{2} - faa}{f} \right) i$$

$$\frac{25}{2} = 12.5$$

$$Md = 69.5 + \left(\frac{72.5 - 5}{9} \right) 7$$

$$Md = 69.5 + \left(\frac{7.5}{9} \right) 7$$

$$Md = 69.5 + (0.83) 7$$

$$Md = 69.5 + 5.81$$

$$Md = \underline{75.31}$$

Moda

$$Mo = Lr_i + \left(\frac{\Delta_1}{\Delta_1 + \Delta_2} \right) i$$

$$\Delta_1 = 9 - 3 = 6$$

$$\Delta_2 = 9 - 9 = 0$$

$$Mo = 69.5 + \left(\frac{6}{6 - 0} \right) 7$$

$$Mo = 69.5 + \left(\frac{6}{6} \right) 7$$

$$Mo = 69.5 + (1) 7$$

$$Mo = 69.5 + 7$$

$$Mo = \underline{76.5}$$

Cuartiles

$$Q1 = Lr_i + \left(\frac{\frac{N}{4} - f_{aa}}{f} \right) i$$

$$\frac{25 \times 1}{4} = 6.25$$

$$Q1 = 69.5 + \left(\frac{6.25 - 5}{9} \right) 7$$

$$Q1 = 69.5 + \left(\frac{1.25}{9} \right) 7$$

$$Q1 = 69.5 + (0.74) 7$$

$$Q1 = 69.5 + 0.98$$

$$Q1 = \underline{70.48}$$

$$Q2 = Lr_i + \left(\frac{\frac{2N}{4} - f_{aa}}{f} \right) i$$

$$\frac{2 \times 25}{4} = 12.5$$

$$Q2 = 69.5 + \left(\frac{12.5 - 5}{9} \right) 7$$

$$Q2 = 69.5 + \left(\frac{7.5}{9} \right) 7$$

$$Q2 = 69.5 + (0.83) 7$$

$$Q2 = 69.5 + 5.81$$

$$Q2 = \underline{75.31}$$

$$Q_3 = L_{ri} + \left(\frac{\frac{3N}{4} - F_{aa}}{f} \right) i$$

$$\frac{3 \times 25}{4} = 18.75$$

$$Q_3 = 76.5 + \left(\frac{18.75 - 14}{9} \right) 7$$

$$Q_3 = 76.5 + \left(\frac{4.75}{9} \right) 7$$

$$Q_3 = 76.5 + (0.53) 7$$

$$Q_3 = 76.5 + 3.71$$

$$Q_3 = \underline{80.21}$$

Deciles

$$D_2 = L_{ri} + \left(\frac{\frac{N}{10} - f_{aa}}{f} \right) i$$

$$\frac{25 \times 2}{10} = 5$$

$$D_2 = 62.5 + \left(\frac{5 - 2}{3} \right) 7$$

$$D_2 = 62.5 + \left(\frac{3}{3} \right) 7$$

$$D_2 = 62.5 + (1) 7$$

$$D_2 = 62.5 + 7$$

$$D_2 = \underline{69.5}$$

$$D6 = L_{ri} + \left(\frac{\frac{N6}{T0} - f_{aa}}{f} \right) i$$

$$\frac{25 * 6}{10} = 15$$

$$D6 = 76.5 + \left(\frac{15 - 14}{9} \right) 7$$

$$D6 = 76.5 + \left(\frac{1}{9} \right) 7$$

$$D6 = 76.5 + (0.77) 7$$

$$D6 = 76.5 + 0.77$$

$$D6 = \underline{77.27}$$

$$D9 = L_{ri} + \left(\frac{\frac{N9}{T0} - f_{aa}}{f} \right) i$$

$$\frac{25 * 9}{10} = 22.5$$

$$D9 = 76.5 + \left(\frac{22.5 - 14}{9} \right) 7$$

$$D9 = 76.5 + \left(\frac{8.5}{9} \right) 7$$

$$D9 = 76.5 + (0.94) 7$$

$$D9 = 76.5 + 6.58$$

$$D9 = \underline{83.08}$$

Percentiles

$$P_{15} = L_{ri} + \left(\frac{\frac{N_{15}}{100} - f_{aa}}{f} \right) i$$

$$\frac{25 \times 75}{100} = 3.75$$

$$P_{15} = 62.5 + \left(\frac{3.75 - 2}{3} \right) 7$$

$$P_{15} = 62.5 + \left(\frac{1.75}{3} \right) 7$$

$$P_{15} = 62.5 + (0.58) 7$$

$$P_{15} = 62.5 + 4.06$$

$$P_{15} = \underline{66.56}$$

$$P_{70} = L_{ri} + \left(\frac{\frac{N_{70}}{100} - f_{aa}}{f} \right) i$$

$$\frac{25 \times 70}{100} = 17.5$$

$$P_{70} = 76.5 + \left(\frac{17.5 - 14}{9} \right) 7$$

$$P_{70} = 76.5 + \left(\frac{3.5}{9} \right) 7$$

$$P_{70} = 76.5 + (0.39) 7$$

$$P_{70} = 76.5 + 2.73$$

$$P_{70} = \underline{79.23}$$

$$P_{95} = L_{ri} + \left(\frac{\frac{N_{95}}{100} - F_{aa}}{f} \right) i$$

$$\frac{25 * 95}{100} = 23.75$$

$$P_{95} = 83.5 + \left(\frac{23.75 - 23}{2} \right) 7$$

$$P_{95} = 83.5 + \left(\frac{0.75}{2} \right) 7$$

$$P_{95} = 83.5 + (0.38) 7$$

$$P_{95} = 83.5 + 2.66$$

$$P_{95} = \underline{86.16}$$

Polígono de Frecuencias

Puntcos de 25 alumnos en un examen de Contabilidad de Sociedades

