Semana N8 Alan Pérez.

1) Ordene los datos.

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) Calcule k

$k = 1 + 3.322 \text{ Long}(n)$

$k = 1 + 3.322 \text{ Long}(25)$

$k = 1 + 3.322 \ (1.39794)$

$k = 1 + 4.64$

$k = 5.64$

3) Calcule R.

$49 - 90 + 1 = 41$

$41 + 1 = 42.$

4) Calcule I.

$\frac{k}{R} = \frac{5.64}{42.} = I = 7.45$

$I = 7$

K	La	Lri	LrS	xs	f	fa
1	49 - 55	48.5	55.5	52	2	2
2	56 - 62	55.5	62.5	59	0	2
3	63 - 69	62.5	69.5	66	3	5
4	70 - 76	69.5	76.5	73	9	14
5	77 - 83	765	835	80	9	23
6	84 - 90	835	905	87	2	25

$\Sigma f = 25$

f x s
104
0
198
657
720
174

$\Sigma f x s = 1,853$

$$\bar{x} = \frac{\Sigma f x s}{N}$$

$$\bar{x} = \frac{1,853}{25} = 74.12$$

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

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

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

$$Md = 695 + (0.83)\,7$$

$$Md = 69.5 + 5.81$$

$$Md = 75.31$$

$\Delta 1 = 9 - 9 = 0$

$\Delta 2 = 9 - 2 = 7$

$$MO = Lri + \left(\frac{\Delta 1}{\Delta 1 + \Delta 2}\right)$$

$$MO = 765 \left(\frac{0}{0 - 7}\right) 7$$

$MO = 765$

Cuartiles.

$Q1 = Lri + \left(\frac{N/4 - faa}{f}\right) i$ $\qquad \frac{25}{4} = 6.25$

$Q1 = Lri\ 6.95 \left(\frac{6.25 - 5}{9}\right) 7$

$Q1 = 6.95 + \left(\frac{1.25}{9}\right) 7$

$Q1 = 6.95 + (0.14)\ 7$ $\qquad Q1 = 6.95 + 0.98 = 7.048$

$Q2 = Lri + \left(\frac{N/4 - faa}{f}\right) i$ $\qquad \frac{2 \times 25}{4} = 12.5$

$Q2 = Lri + \left(\frac{12.5 - 5}{9}\right) 7$ $\qquad Q2 = 6.95 + \left(\frac{7.5}{9}\right) 7$

$Q2 = 6.95 + (0.83)\ 7$ $\qquad Q = 6.95 + 5.81$

$Q2 = 75.31$

$Q3 = 76.5 + \left(\frac{18.75 - 14}{9}\right) 7$ $\qquad \frac{3 \times 25}{4} = 18.75$

$Q3 = 76.5 + \left(\frac{4.75}{9}\right) 7$ $\qquad Q3 = 76.5 + (0.53)\ 7$

$Q3 = 76.5 + 3.71$ $\qquad Q3 = 80.21$

Deciles

$$D2 = Lri + \left(\frac{N/2 - faa}{f}\right) i \qquad \frac{2 \times 25}{10} = 5$$

$$D2 = 62.5 + \left(\frac{5-2}{3}\right) 7$$

$$D2 = 62.5 + \left(\frac{3}{3}\right) 7$$

$$D2 = 62.5 + (1)\,7 \qquad 62 + 7 = \qquad D2 = 69.5$$

$$D6 = Lri + \left(\frac{N \times 6 - faa}{f}\right) i \qquad \frac{25 \times 6}{10} = 15.0$$

$$D6 = 76.5 + \left(\frac{150 - 14}{9}\right) 7$$

$$D6 = 76.5 + \left(\frac{100}{9}\right) 7$$

$$D6 = 76.5 + (0.11)\,7 \qquad D6 = 76.5 + 0.77 \qquad D6 = 77.2$$

$$D9 = 76.5 + \left(\frac{225 - 14}{9}\right) 7 \qquad \frac{9 \times 25}{10} = 22.5$$

$$D9 = 76.5 + \left(\frac{850}{9}\right) 7$$

$$D9 = 76.5 + (0..94)\,7 \qquad D9 = 76.5 + 6.58$$

$$D9 = 83.08$$

Percentiles.

$P15 = \frac{25 \times 15}{100} = 3.75$

$P15 = 62.5 + \left(\frac{3.75 - 2}{3}\right)7$

$P15 = 62.5 + \left(\frac{1.75}{3}\right)7$

$P15 = 62.5 + (0.58)7$

$P15 = 62.5 + 4.06$

$P15 = 66.56$

$P70 = 76.5 + \left(\frac{17.5 - 14}{9}\right)7$

$P70 = 76.5 + \left(\frac{3.5}{9}\right)7$

$P70 = 76.5 + (0.39)7$

$P70 = 76.5 + 2.73$

$P70 = 79.23$

$P70 = \frac{25 \times 70}{100}$

17.5

$$P95 = \frac{25 \times 95}{100} = 23.75$$

$$P95 = 83.5 + \left(\frac{23.75 - 23}{2}\right)7$$

$$P95 = 83.5 + \left(\frac{0.75}{2}\right)7$$

$$P95 = 83.5 + (0.38)7$$

$$P95 = 83 + 2.66.$$

$$P95 = 86.16$$

Punteos obtenidos de 25 alumnos en un examen de contabilidad de sociedades.