Universidad del sureste

Estructura Organizacional

Licenciatura en Administración de Empresas

Tercer Cuatrimestre

Cuadro Sinóptico

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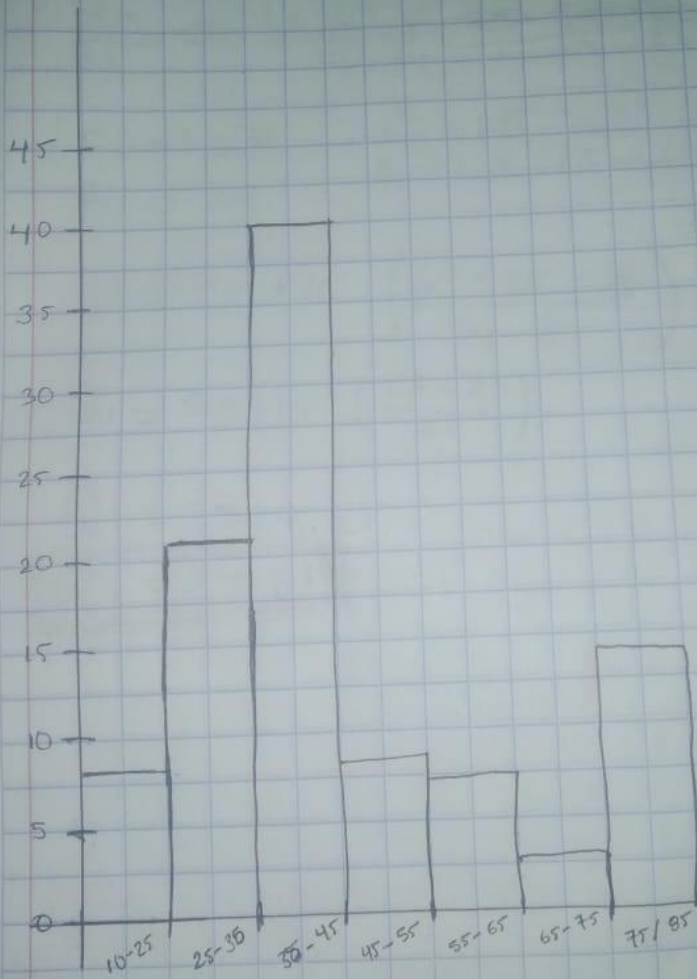**Comitán de Domínguez, Chiapas 06 de junio del 2020.**

Estadística

Yeni Fernanda Vázquez D.

Datos	fi	fire	mc	fi·mc	fr	fire
10-25	8	8	17.5	140	.079	7.9%
25-35	21	29	30	630	.207	20.7%
35-45	40	69	40	1,600	.396	39.6%
45-55	8	77	50	400	.079	7.9%
55-65	7	84	60	420	.069	6.9%
65-75	3	87	70	210	.029	2.9%
75-85	14	101	80	1,120	.138	13.8%

$$n = 101$$

$$\frac{fi}{n}$$

$$\frac{fi}{n} = .100$$

45
40
35
30
25
20
15
10
5
0

10-25   25-35   35-45   45-55   55-65   65-75   75/85

SEGUNDO CUARTIL

$$\frac{Kn}{4} = \frac{2 \times 101}{4} = 50.5 \text{ posición}$$

$F_{i-1} \quad 50 \qquad\qquad L_i = 45$

$F_i = \quad 60 \qquad\qquad A = L_s - L_i = 55 - 45 = 10$

$$Q_2 = 45 + 10 \left(\frac{50.5 - 50}{60 - 50}\right)$$

$$Q_2 = 45 + 10 \left(\frac{0.5}{10}\right)$$

$$Q_2 = 45 + 0.5$$

$$\boxed{Q_2 = 45.5}$$

TERCER CUARTIL

$$\frac{Kn}{4} = \frac{3 \cdot 101}{4} = 75.75 \text{ posición}$$

$F_{i-1} = 69 \qquad\qquad L_i = 45$

$F_i = 77 \qquad\qquad A = L_s - L_i = 10$

$$Q_3 = 45 + 10 \left(\frac{75.75 - 69}{77 - 69}\right)$$

$$Q_3 = 45 + 10 \left(\frac{6.75}{8}\right)$$

$$Q_3 = 45 + 8.43$$

$$\boxed{Q_3 = 53.43}$$

PRIMER CUARTIL

$$Q_k = Li + A \left(\frac{\frac{kn}{4} - Fi-1}{Fi - f-1} \right)$$

$$\frac{kn}{4} = \frac{1 \times 101}{4} = 25.25 \text{ posición}$$

$Fi-1 = 8$ $Li = 25$

$Fi = 29$ $A = LS - Li = 10$

$$Q1 = 25 + 10 \left(\frac{25.25 - 8}{29 - 8} \right)$$

$$Q_1 = 25 + 10 \left(\frac{17.25}{21} \right)$$

$$Q_1 = 25 + 8.21$$

$$\boxed{Q_1 = 33.21}$$

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PRIMER Decil

$$D_k = L_i + A \left(\frac{\frac{kn}{10} - f_{i-1}}{f_i - f_{i-1}} \right)$$

$$\frac{kn}{10} = \frac{1 \times 101}{10} = 10.1 \text{ Posision}$$

$$F_{i-1} = 8 \qquad L_i = 25$$
$$F_i = 29 \qquad A = L_s - L_i = 10$$

$$D_1 = 25 + 10 \left(\frac{10.1 - 8}{29 - 8} \right)$$

$$D_1 = 25 + 10 \left(\frac{2.1}{21} \right)$$

$$D_1 = 25 + 1$$

$$\boxed{D_1 = 26}$$

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$$D_k = L_i + A \left(\frac{\frac{kn}{10} - f_{i-1}}{f_i - f_{i-1}} \right)$$

Posición $= \frac{kn}{10} = \frac{2 \cdot 101}{10} = 20 \cdot 2$

$F_{i-1} = 8$ $\qquad$ $L_i = 25$

$F_i = 29,$ $\qquad$ $A = L_s - L_i = 25 - 35 = 10$

$D_2 = 25 + 10 \left(\frac{20 \cdot 2 - 8}{29 - 8} \right)$

$D_2 = 25 + 0 \left(\frac{12 \cdot 2}{21} \right)$

$D_2 = 25 + 5 \cdot 80$

$D_2 = 30.8$

Tercer Decil

$$\frac{Kn}{10} = \frac{3 \times 101}{10} = 30.3$$

$Fi - 1 = 29$ $\qquad$ $Li = 35$

$Fi = 69$ $\qquad$ $A = Ls - Li = 10$

$$D_3 = 35 + 10 \left(\frac{30.3 - 29}{69 - 29} \right)$$

$$D_3 = 35 + 10 \cdot \left(\frac{1.3}{40} \right)$$

$$D_3 = 35 + 0.32$$

$$\boxed{D_3 = 35.32}$$

Cuarto Decil

$$\frac{Kn}{10} = \frac{4 \times 101}{10} = 40.4$$

$Fi - 1 = 29$ $\qquad$ $Li = 35$

$Fi = 69$ $\qquad$ $A = Ls - Li = 45 - 35 = 10$

$$D_4 = 35 + 10 \left(\frac{40.4 - 29}{69 - 29} \right)$$

$$D_4 = 35 + 10 \left(\frac{11.4}{40} \right)$$

$$D_4 = 35 + 2.85$$

$$\boxed{D_4 = 37.85}$$

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Quinto Decil

$$\frac{Kn}{10} = \frac{5 \times 101}{10} = 50.5$$

$$F_{1} - 1 = 29 \qquad Li = 35$$
$$F_{1} = 69 \qquad A = Ls - Li = 10$$

$$D_5 = 35 + 10 \left(\frac{50.5 - 29}{69 - 29} \right)$$

$$D_5 = 35 + 10 \left(\frac{21.5}{40} \right)$$

$$D_5 = 35 + 5.37$$

$$\boxed{D_5 = 40.37}$$