



**ESCUELA:UNIVERSIDAD DEL
SURESTE**

ALUMNO: GRISLY MARBEY LÓPEZ FIGUEROA

CARRERA: ADMINISTRACIÓN DE EMPRESAS

MATERIA:ESTADÍSTICA DESCRIPTIVA.

CUATRIMESTRE: 3RO GRUPO: A

**NOMBRE DEL CATEDRATICO: ALBORES
AGUILAR JORGE ENRIQUE.**

LUGAR: COMITÁN DE DOMÍNGUEZ

FECHA ENTREGA:20/JUNIO/2020

Instrucciones: Complete la siguiente tabla para datos agrupados.

CRISTY MARBEY LOPEZ FIGUEROA.

DATOS	f_i	F_{inc}	MC	$f_i \cdot MC$	F_r	f_{ir}
15-35	8	8	25	200	0.166	16.6%
35-55	4	12	45	180	0.083	8.3%
55-75	12	24	65	780	0.25	25%
75-95	8	32	85	680	0.166	16.6%
95-115	7	39	105	735	0.145	14.5%
115-135	3	42	125	375	0.062	6.2%
135-155	6	48	145	870	0.125	12.5%
	48					

$$n = 48$$

Instrucciones: Dada la siguiente tabla calcule:

Cuartil: 1, 2, 3

Decil: 3, 7, 9

Percentil: 40, 57, 78

DATOS	f_i	F_i
25-35	8	8
35-45	4	12
45-55	12	24
55-65	8	32
65-75	7	39
75-85	3	42
85-95	6	48

PRIMER CUARTIL

$$Q_k = L_i + A = \left(\frac{K_n - F_{i-1}}{F_i - F_{i-1}} \right)$$

$$\text{Posición } \frac{K_n}{4} = \frac{1 \times 48}{4} = 12$$

$$F_{i-1} = 8$$

$$L_i = 35$$

$$F_i = 12$$

$$A = L_s - L_i = 10$$

$$Q_1 = 35 + 10 \left(\frac{12 - 8}{12 - 8} \right)$$

$$Q_1 = 35 + 10 \left(\frac{4}{4} \right)$$

$$Q_1 = 35 + 10$$

$$Q_1 = \underline{\underline{45}}$$

SEGUNDO CUARTIL

$$\text{Posición } \frac{K_n}{4} = \frac{2 \times 48}{4} = 24$$

$$F_{i-1} = 12$$

$$L_i = 45$$

$$F_i = 24$$

$$A = L_s - L_i = 10$$

$$Q_2 = 45 + 10 \left(\frac{24 - 12}{24 - 12} \right)$$

$$Q_2 = 45 + 10 \left(\frac{12}{12} \right)$$

$$Q_2 = 45 + 10$$

$$Q_2 = \underline{\underline{55}}$$

TERCER CUARTIL

$$\text{Posición} = \frac{3 \times 48}{4} = 36$$

$$F_{i-1} = 32$$

$$L_i = 65$$

$$F_i = 39$$

$$A = L_s - L_i = 10$$

$$Q_3 = 65 + 10 \left(\frac{36 - 32}{39 - 32} \right)$$

$$Q_3 = 65 + 10 \left(\frac{4}{7} \right)$$

$$Q_3 = 65 + 10$$

$$Q_3 = \underline{\underline{75}}$$

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Deal # 3

$$D_k = L_i + A = \left(\frac{K_n}{10} - F_{i-1} \right) / (F_i - F_{i-1})$$

$$\text{Posición } \frac{K_n}{10} = \frac{3 \times 48}{4} = 14.4$$

$$F_{i-1} = 12$$

$$L_i = 45$$

$$F_i = 24$$

$$A = L_s - L_i = 10$$

$$D_3 = 45 + 10 \left(\frac{14.4 - 12}{24 - 12} \right)$$

$$D_3 = 45 + 10 \left(\frac{2.4}{12} \right)$$

$$D_3 = 45 + 2$$

$$D_3 = \underline{\underline{47}}$$

Deal # 7

$$\text{Posición } \frac{K_n}{10} = \frac{7 \times 48}{10} = 33.6$$

$$F_{i-1} = 32$$

$$L_i = 65$$

$$F_i = 39$$

$$A = 10$$

$$D_7 = 65 + 10 \left(\frac{33.6 - 32}{39 - 32} \right)$$

$$D_7 = 65 + 10 \left(\frac{1.6}{7} \right)$$

$$D_7 = 65 + 2.28$$

$$D_7 = \underline{\underline{67.28}}$$

Deal # 9

$$\text{Posición } \frac{9 \times 48}{10} = 43.2$$

$$F_{i-1} = 42$$

$$L_i = 85$$

$$F_i = 48$$

$$A = L_s - L_i = 10$$

$$D_9 = 85 + 10 \left(\frac{43.2 - 42}{48 - 42} \right)$$

$$D_9 = 85 + 10 \left(\frac{1.2}{6} \right)$$

$$D_9 = 85 + 2$$

$$D_9 = \underline{\underline{87}}$$

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PERCENTIL # 40

$$P_k = L_i + A \cdot \left(\frac{\frac{Kn}{100} - F_{i-1}}{F_i - F_{i-1}} \right)$$

$$\text{Posición } \frac{Kn}{100} = \frac{40 \times 48}{100} = 19.2$$

$$F_{i-1} = 12$$

$$L_i = 45$$

$$F_i = 24$$

$$A = L_s - L_i = 10$$

$$P_{40} = 45 + 10 \left(\frac{19.2 - 12}{24 - 12} \right)$$

$$P_{40} = 45 + 10 \left(\frac{7.2}{12} \right)$$

$$P_{40} = 45 + 6$$

$$P_{40} = \underline{\underline{51}}$$

PERCENTIL # 57

$$\text{Posición } \frac{Kn}{100} = \frac{57 \times 48}{100} = 27.36$$

$$F_{i-1} = 24$$

$$L_i = 55$$

$$F_i = 32$$

$$A = L_s - L_i = 10$$

$$P_{57} = 55 + 10 \left(\frac{27.36 - 24}{32 - 24} \right)$$

$$P_{57} = 55 + 10 \left(\frac{3.36}{1.33} \right)$$

$$P_{57} = 55 + 25.26$$

$$P_{57} = \underline{\underline{80.26}}$$

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PERCENTIL # 78

$$P_k = Li + A = \left(\frac{\frac{Kn}{100} - Fi-1}{Fi - Fi-1} \right)$$

$$\text{Posición} = \frac{Kn}{100} = \frac{78 \times 48}{100} = 37.44$$

$$Fi-1 = 32$$

$$Li = 65$$

$$Fi = 39$$

$$A = Ls - Li = 10$$

$$P_{78} = 65 + 10 \left(\frac{37.44 - 32}{39 - 32} \right)$$

$$P_{78} = 65 + 10 \left(\frac{5.44}{7} \right)$$

$$P_{78} = 65 + 7.77$$

$$P_{78} = \underline{\underline{72.77}}$$