



ESTADISTICA DESCRIPTIVA

EXAMEN UNIDAD II

Alumno: LIMBERG ALBORES MONTOYA

**Licenciatura en Administración y Estrategias
de Negocios**

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Cuantiles: 1, 2, 3

Decantil: 2, 4, 6, 8

Percentil: 5, 22, 35, 41, 66

Intervalo	f_i	F_i
15 - 25	10	10
25 - 35	3	13
35 - 45	6	19
45 - 55	7	26
55 - 65	3	29
65 - 75	6	35
75 - 85	9	44
	<u>= 44</u>	

$$Q_n = Li + A \left(\frac{kn - F_{i-1}}{F_i - F_{i-1}} \right)$$

Posición $\frac{kn}{n}$

$$Q_n = L5$$

$$Q_1 \rightarrow \frac{1 \cdot 44}{4} = 11$$

$$F_{i-1} = 10 \quad L_i = 25 \\ F_i = 13 \quad A = L_5 - L_i = 10$$

$$Q_1 = 25 + 10 \left(\frac{11 - 10}{13 - 10} \right)$$

$$Q_1 = 25 + 10 \cdot \left(\frac{1}{3} \right)$$

$$Q_1 = 25 + 3.333$$

$$Q_1 = \underline{28.333}$$

$$Q_2 \rightarrow \frac{2 \cdot 44}{4} = 22$$

$$F_{i-1} = 19 \quad L_i = 45 \\ F_i = 26 \quad A = L_5 - L_i = 10$$

$$Q_2 = 45 + 10 \left(\frac{22 - 19}{26 - 19} \right)$$

$$Q_2 = 45 + 10 \cdot \left(\frac{3}{7} \right)$$

$$Q_2 = 45 + 4.285$$

$$Q_2 = \underline{49.285}$$

$$Q_3 \rightarrow \frac{3 \cdot 44}{4} = 33$$

$$F_{i-1} = 29 \quad L_i = 65 \\ F_i = 35 \quad A = L_5 - L_i = 10$$

$$Q_3 = 65 + 10 \left(\frac{33 - 29}{35 - 29} \right)$$

$$Q_3 = 65 + 10 \cdot \left(\frac{4}{6} \right)$$

$$Q_3 = 65 + 6.666$$

$$Q_3 = \underline{71.666}$$

$$D_2 \rightarrow \frac{2 \cdot 44}{10} = 8.8$$

$$F_{i-1} = 0 \quad L_i = 15 \\ F_i = 10 \quad A = L_5 - L_i = 10$$

$$D_2 = 15 + 10 \left(\frac{8.8 - 0}{10 - 0} \right)$$

$$D_2 = 15 + 10 \cdot \left(\frac{8.8}{10} \right)$$

$$D_2 = 15 + 8.8$$

$$D_2 = \underline{23.8}$$

$$D_4 \rightarrow \frac{4 \cdot 44}{10} = 17.6$$

$$F_{i-1} = 13 \quad L_i = 35 \\ F_i = 19 \quad A = L_5 - L_i = 10$$

$$D_4 = 35 + 10 \left(\frac{17.6 - 13}{19 - 13} \right)$$

$$D_4 = 35 + 10 \cdot \left(\frac{4.6}{6} \right)$$

$$D_4 = 35 + 7.666$$

$$D_4 = \underline{42.666}$$

$$D_6 \rightarrow \frac{6 \cdot 44}{10} = 26.4$$

$$F_{i-1} = 26 \quad L_i = 55 \\ F_i = 29 \quad A = L_5 - L_i = 10$$

$$D_6 = 55 + 10 \left(\frac{26.4 - 26}{29 - 26} \right)$$

$$D_6 = 55 + 10 \cdot \left(\frac{0.4}{3} \right)$$

$$D_6 = 55 + 1.333$$

$$D_6 = \underline{56.333}$$

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$$D_8 \rightarrow \frac{8 \cdot 44}{10} = 35.2 \quad F_1 - 1 = 35 \quad L_1 = 65$$

$$D_8 = 65 + 10 \left(\frac{35.2 - 35}{44 - 35} \right) \quad D_8 = 65 + 10 \left(\frac{0.2}{9} \right)$$

$$D_8 = 65 + 0.2 \quad \underline{D_8 = 65.222 \neq}$$

$$P_5 \rightarrow \frac{5 \cdot 44}{100} = 2.2 \quad F_1 - 1 = 0 \quad L_1 = 15$$

$$P_5 = 15 + 10 \left(\frac{2.2 - 0}{10 - 0} \right) \quad F_1 = 10 \quad A = L_5 - L_1 = 10$$

$$P_5 = 15 + 2.2 \quad \underline{P_5 = 17.2 \neq}$$

$$P_{22} \rightarrow \frac{22 \cdot 44}{100} = 9.68 \quad F_1 - 1 = 0 \quad L_1 = 15$$

$$P_{22} = 15 + 10 \left(\frac{9.68 - 0}{10 - 0} \right) \quad F_1 = 10 \quad A = L_5 - L_1 = 10$$

$$P_{22} = 15 + 9.68 \quad \underline{P_{22} = 24.68 \neq}$$

$$P_{35} = \frac{35 \cdot 44}{100} = 15.4 \quad F_1 - 1 = 13 \quad L_1 = 35$$

$$P_{22} = 35 + 10 \left(\frac{15.4 - 13}{19 - 13} \right) \quad F_1 = 19 \quad A = L_5 - L_1 = 10$$

$$P_{22} = 35 + 10 \left(\frac{2.4}{6} \right) \quad P_{22} = 35 + 4 \quad \underline{P_{22} \neq 39 \neq}$$

$$P_{41} = \frac{41 \cdot 44}{100} = 18.04 \quad F_1 - 1 = 13 \quad L_1 = 35$$

$$P_{41} = 35 + 10 \left(\frac{18.04 - 13}{19 - 13} \right) \quad F_1 = 19 \quad A = L_5 - L_1 = 10$$

$$P_{41} = 35 + 8.4 \quad \underline{P_{41} = 43.4 \neq}$$

$$P_{66} = \frac{66 \cdot 44}{100} = 29.04 \quad F_1 - 1 = 29 \quad L_1 = 65$$

$$P_{66} = 65 + 10 \left(\frac{29.04 - 29}{35 - 29} \right) \quad F_1 = 35 \quad A = L_5 - L_1 = 10$$

$$P_{66} = 65 + 0.066 \quad \underline{P_{66} = 65.066 \neq}$$

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