

**NOMBRE DEL TRABAJO:** EJERCICIOS

**MATERIA:** ESTADISTICA DESCRIPTIVA



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**MODALIDAD:** SEMIESCOLARIZADO

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Tabla de Frecuencia						
Datos	$f_i$	$f_{ire}$	$M_c$	$f_i \cdot M_c$	$f_r$	$f_{ir}$
25-35	8	8	15	120	0.166	16.6 %
35-45	4	12	25	100	0.083	8.3 %
45-55	12	24	35	420	0.25	25 %
55-65	8	32	45	360	0.166	16.6 %
65-75	7	39	55	385	0.145	14.5 %
75-85	3	42	65	195	0.062	6.2 %
85-95	6	48	75	450	0.125	12.5 %

$N=48$

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

Cuartiles

1, 2, 3

$$\text{Posición } Q_1 = \frac{(1)(48)}{4} = 12$$

$Q_1 =$  Limite superior

$$Q_1 = 45$$

$$\text{Posición } Q_2 = \frac{(2)(48)}{4} = 24$$

$Q_2 =$  Limite superior

$$Q_2 = 55$$

$$\text{Posición } Q_3 = \frac{(3)(48)}{4} = 36$$

$$Q_3 = 65 + 10 \left( \frac{36 - 32}{39 - 32} \right) = 65 + 10 \left( \frac{4}{7} \right) = 65 + 5.71 = \underline{70.71}$$

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

Deciles

3, 7, 9

$$\text{Posición } D_3 = \frac{(3)(48)}{10} = 14.4$$

$$D_3 = 45 + 10 \left( \frac{14.4 - 12}{24 - 12} \right) = 45 + 10 \left( \frac{2.4}{12} \right) = 45 + 2 = \underline{47}$$

$$\text{Posición } D_7 = \frac{(7)(48)}{10} = 33.6$$

$$D_7 = 65 + 10 \left( \frac{33.6 - 32}{39 - 32} \right) = 65 + 10 \left( \frac{1.6}{7} \right) = 65 + 2.28 = \underline{67.28}$$

$$\text{Posición } D_9 = \frac{(9)(48)}{10} = 43.2$$

$$D_9 = 85 + 10 \left( \frac{43.2 - 42}{48 - 42} \right) = 85 + 10 \left( \frac{1.2}{6} \right) = 85 + 2 = \underline{87}$$



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

Percentiles  
40, 57, 78

$$P_{\text{Posición } p_{40}} = \frac{(40)(48)}{100} = 19.2$$

$$P_{40} = 45 + 10 \left( \frac{19.2 - 12}{24 - 12} \right) = 45 + 10 \left( \frac{7.2}{12} \right) = 45 + 6 = \underline{51}$$

$$P_{\text{Posición } p_{57}} = \frac{(57)(48)}{100} = 27.36$$

$$P_{57} = 55 + 10 \left( \frac{27.36 - 24}{32 - 24} \right) = 55 + 10 \left( \frac{3.36}{8} \right) = 55 + 4.2 = \underline{59.2}$$

$$P_{\text{Posición } p_{78}} = \frac{(78)(48)}{100} = 37.44$$

$$P_{78} = 65 + 10 \left( \frac{37.44 - 32}{39 - 32} \right) = 65 + 10 \left( \frac{5.44}{7} \right) = 65 + 7.77 = \underline{72.77}$$