Alejandra Mendoza

Tarea No. 1

Calcular con la tabla

- Cuartiles: 1 y 3
- Deciles: 1 y 5
- Percentiles: 70 y 85

L.A	Lxi	f	fa
48 - 56	47.5	5	5
57 - 65	56.5	8	13
66 - 74	65.5	7	20
75 - 83	74.5	9	29
84 - 92	83.5	6	35

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Cuartil 1

$$Q_1 = Lx_1 + \left(\frac{n/4 - faa}{f}\right) i$$

$$Q_1 = 56.5 + \left(\frac{8.75 - 5}{8}\right) 9$$

$$Q_1 = 56.5 + \left(\frac{3.75}{8}\right) 9$$

$$Q_1 = 56.5 + (0.47)\, 9$$

$$Q_1 = 56.5 + 4.23$$

$$Q_1 = 60.73$$

Cuartil 3

$$Q_3 = Lx_1 + \left(\frac{3n/4 - faa}{f}\right) i$$

$$Q_3 = 74.5 + \left(\frac{26.25 - 20}{9}\right) 9$$

$$Q_3 = 74.5 + \left(\frac{6.25}{9}\right) 9$$

$$Q_3 = 74.5 + (0.69)\, 9$$

$$Q_3 = 74.5 + 6.21$$

$$Q_3 = 80.71$$

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Decil 1

$$D_1 = Lri + \left(\frac{n/10 - faa}{f}\right) i$$

$$D_1 = 47.5 + \left(\frac{3.5}{5} - 0\right) 9$$

$$D_1 = 47.5 + \left(\frac{3.5}{5}\right) 9$$

$$D_1 = 47.5 + (0.7)\, 9$$

$$D_1 = 47.5 + 6.3$$

$$D_1 = 53.8$$

Decil 5

$$D_5 = Lri + \left(\frac{5n/10 - faa}{f}\right) i$$

$$D_5 = 65.5 + \left(\frac{17.5 - 13}{7}\right) 9$$

$$D_5 = 65.5 + \left(\frac{4.5}{7}\right) 9$$

$$D_5 = 65.5 + (0.64)\, 9$$

$$D_5 = 65.5 + 5.76$$

$$D_5 = 71.26$$

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Percentil 70

$$P_{70} = Lri + \left(\frac{70n/100 - faa}{f}\right) i$$

$$P_{70} = 74.5 + \left(\frac{24.5 - 20}{9}\right) 9$$

$$P_{70} = 74.5 + \left(\frac{4.5}{9}\right) 9$$

$$P_{70} = 74.5 + (0.5)\,9$$

$$P_{70} = 74.5 + 4.5$$

$$P_{70} = 79$$

Percentil 85

$$P_{85} = Lri + \left(\frac{85n/100 - faa}{f}\right) i$$

$$P_{85} = 83.5 + \left(\frac{29.75 - 29}{6}\right) 9$$

$$P_{85} = 83.5 + \left(\frac{0.75}{6}\right) 9$$

$$P_{85} = 83.5 + (0.13)\,9$$

$$P_{85} = 83.5 + 1.17$$

$$P_{85} = 84.67$$