

Lección 7 / semana 16

Hallar los percentiles 21 y 35 de las sig. series de datos no agrupados.

a) $\begin{matrix} 1 & 1 \\ 21 & 25 & 28 & 30 & 40 & 49 & 51 & 58 & 60 \end{matrix}$

$$P_{21} = \frac{K(n+1)}{100} = \frac{21(9+1)}{100} = \frac{21(10)}{100} = \frac{210}{100} = 2.1$$

$$P_{21} = 25 + (28 - 25)(0.1) \quad \text{R/ El cuartil 21 es 25.3}$$

$$P_{21} = 25 + (3)(0.1)$$

$$P_{21} = 25 + 0.3$$

$$P_{21} = 25.3$$

$$P_{35} = \frac{K(n+1)}{100} = \frac{35(9+1)}{100} = \frac{35(10)}{100} = \frac{350}{100} = 3.5$$

$$P_{35} = 28 + (30 - 28)(0.5)$$

$$P_{35} = 28 + (2)(0.5)$$

$$P_{35} = 28 + 1$$

$$P_{35} = 29$$

R/ El cuartil
35 es 29

↓ ↓
b) 12, 19, 23, 24, 41, 50, 80, 90.

$$P_{21} = \frac{K(n+1)}{100} = \frac{21(9+1)}{100} = \frac{21(10)}{100} = \frac{21 \cdot 0}{100} = 2.1$$

$$P_{21} = 25(28 - 25)(0.1)$$

$$P_{21} = 25 + (3)(0.1)$$

$$P_{21} = 25 + 0.3$$

$$P_{21} = 25.3$$

R/El cuartil 21 es 25.3

$$P_{35} = \frac{K(n+1)}{100} = \frac{35(9+1)}{100} = \frac{35(10)}{100} = \frac{35 \cdot 0}{100} = 3.15$$

$$P_{35} = 23 + (24 - 23)(0.15)$$

$$P_{35} = 23 + (1)(0.15)$$

$$P_{35} = 23 + 0.15$$

$$P_{35} = 23.15$$

R/El cuartil 35 es 23.15

c) 12, 14, 34, 47, 49, 50, 51, 62, 85, 89, 99, 101

$$R_1 = \frac{k(n+1)}{100} = \frac{21(102+1)}{100} = \frac{21(103)}{100} = \frac{2163}{100} = 21.63$$

$$P_{21} = 14 + (34 - 14)(0.73)$$

$$P_{21} = 14 + (20)(0.73)$$

$$P_{21} = 14 + 14.6$$

$$P_{21} = 28.6$$

R/El cuartil 21 es 28.6

$$P_{35} = \frac{k(n+1)}{100} = \frac{35(102+1)}{100} = \frac{35(103)}{100} = \frac{3605}{100} = 36.05$$

$$P_{35} = 47 + (49 - 47)(0.55)$$

$$P_{35} = 47 + (2)(0.55)$$

$$P_{35} = 47 + 1.1$$

$$P_{35} = 48.1$$

R/El cuartil 35 es 48.1