

Lección 7 / Semana 16

Hallar los percentiles 21 y 35 de las siguientes series de datos no agrupados. Realizar en cuaderno.

a) 21, 25, 28, 30, 49, 49, 51, 58, 60

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

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

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

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

$$P_{21} = 25.3$$

P// El cuartil 21 es 25.3

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

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

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

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

$$P_{35} = 29$$

P// El cuartil 35 es 29

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

$$P_{21} = \frac{k(n+1)}{100} = \frac{21(8+1)}{100} = \frac{21(9)}{100} = \frac{189}{100} = 1.89$$

$$P_{21} = 12 + (19 - 12)(0.89)$$

$$P_{21} = 12 + (7)(0.89)$$

$$P_{21} = 12 + 6.23$$

$$P_{21} = 18.23$$

R// El cuartil 21 es 18.23

$$P_{35} = \frac{k(n+1)}{100} = \frac{35(8+1)}{100} = \frac{35(9)}{100} = \frac{315}{100} = 3.15$$

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

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

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

$$P_{35} = 23.15$$

R// El cuartil 35 es 23.15

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

$$P_{21} = \frac{k(n+1)}{100} = \frac{21(12+1)}{100} = \frac{21(13)}{100} = \frac{273}{100} = 2.73$$

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

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

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

$$P_{21} = 28.6$$

P// El cuartil 21 es 28.6

$$P_{35} = \frac{k(n+1)}{100} = \frac{35(12+1)}{100} = \frac{35(13)}{100} = \frac{455}{100} = 4.55$$

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

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

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

$$P_{35} = 48.1$$

P// El cuartil 35 es 48.1