

Actividad #7

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

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

Solución P_{21}

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

$$P_k = \frac{21(9+1)}{100} = \frac{210}{100} = 2.1 \rightarrow 25.3$$

R// El percentil

21 es 25.3

$$P_{21} = 25 + (28 - 25)(0.1) \rightarrow P_{21} = 25 + (3)(0.1) \rightarrow$$

$$P_{21} = 25 + 0.3 = 25.3$$

Solución P_{35}

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

$$P_k = \frac{35(9+1)}{100} = \frac{350}{100} = 3.5 \rightarrow 29$$

R// El percentil

35 es 29

$$P_{35} = 28 + (30 - 28)(0.5) \rightarrow P_{35} = 28 + (2)$$

$$(0.5) \rightarrow P_{35} = 28 + 1 = 29$$

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

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

Solución P_{21}

$$P_k \frac{21(8+1)}{100} = \frac{189}{100} = 1.89 \rightarrow 18.23$$

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

R// El percentil
21 es 18.23

$$P_{21} = 12 + (19 - 12)(0.89) \rightarrow P_{21} = 12.71$$
$$(0.89) \rightarrow P_{21} = 12 + 6.23 = 18.23$$

Solución P_{35}

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

$$P_k \frac{35(8+1)}{100} = \frac{315}{100} = 3.15 \rightarrow 23.15$$

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

R// El percentil
35 es 23.15

$$P_{35} = 23 + (24 - 23)(0.15) \rightarrow P_{35} = 23.15$$
$$\rightarrow P_{35} = 23 + 0.15 = 23.15$$

