

Percentiles

a) 21 25 28 30 49 49 51 58 60

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

$$P_{21} = X_{\text{menor}} + (X_{\text{mayor}} - X_{\text{menor}})(\text{parte decimal})$$

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

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

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

$$P_{21} = 25.3$$

P// El percentil 21 es 25.3

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

$$P_{35} = X_{\text{menor}} + (X_{\text{mayor}} - X_{\text{menor}})(\text{parte decimal})$$

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

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

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

$$P_{35} = 29$$

P// El percentil 35 es 29

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

$$P_{21} = \frac{h(n)}{100} = \frac{21(9)}{100} = \frac{189}{100} = 1.89$$

$$P_{21} = X_{\text{menos}} + (X_{\text{mayor}} - X_{\text{menos}})(\text{Parte decimal})$$

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

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

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

$$P_{21} = 18.23$$

El percentil 21 es 18.23

$$P_{35} = \frac{h(n)}{100} = \frac{35(9)}{100} = \frac{315}{100} = 3.15$$

$$P_{35} = X_{\text{menos}} + (X_{\text{mayor}} - X_{\text{menos}})(\text{Parte decimal})$$

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

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

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

$$P_{35} = 23.15$$

El percentil 35 es 23.15

d) 12 14 24 47 49 50 51 62 95 39 99 101

$$P_{21} = \frac{k(nH)}{100} = \frac{21(121)}{100} = \frac{21(13)}{100} = \frac{273}{100} = 2.73$$

$$P_{21} = X_{\text{menor}} + (X_{\text{mayor}} - X_{\text{menor}})(\text{Parte decimal})$$

$$P_{21} = 14 + (39 - 14)(0.73)$$

$$P_{21} = 14 + (25)(0.73)$$

$$P_{21} = 14 + 18.25$$

$$P_{21} = 32.25$$

R// El percentil 21 es 32.25

$$P_{35} = \frac{k(nH)}{100} = \frac{35(121)}{100} = \frac{35(13)}{100} = \frac{455}{100} = 4.55$$

$$P_{35} = X_{\text{menor}} + (X_{\text{mayor}} - X_{\text{menor}})(\text{Parte decimal})$$

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

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

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

$$P_{35} = 48.1$$

R// El percentil 35 es 48.1