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

a) Datos ordenados

21, 25, 28, 30, 49, 44, 51, 58, 60

$K\left(\frac{n+1}{100}\right)$

$P21 = 21\left(\frac{9+1}{100}\right) = 21\left(\frac{10}{100}\right) = \frac{210}{100} = 2.1$

$p21 = 25 + (28 - 25)(0.1)$

$p21 = 25 + (3)(0.1)$

$p21 = 25 + 0.3 = P21 = \boxed{25.3}$

Solución de P35

$$k\frac{(n+1)}{100}$$

$$P35 = 35\frac{(9+1)}{100} = 35\frac{(10)}{100} = \frac{350}{100} \quad P35 = 3.5$$

$$P35 = 28 + (30 - 28)(0.5)$$

$$P35 = 28 + (2)(0.5)$$

$$P35 = 4 + 0.5 = P35 = 4.5$$

b) Datos Ordenados

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

$$k\frac{(n+1)}{100}$$

$$P21 = 21\frac{(8+1)}{100} = 21\frac{(9)}{100} = \frac{189}{100} = P21 = 7.89$$

$$P21 = 12 + (19 - 12)(0.89)$$

$$P21 = 12 + (7)(0.89)$$

$$P21 = 12 + 6.23 = 18.3$$

Solucion de p35

$$\frac{K(n+1)}{100}$$

$$p35 = \frac{35(8+1)}{100} = \frac{35(9)}{100} = \frac{315}{100} \quad p35 = 3.15$$

$$p35 = 23 + (24 - 23)(0.15)$$

$$p35 = 23 + (1)(0.15)$$

$$p35 = 23 + 0.15 = p35 = 23.15$$

c) Datos Ordenados

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

$$\frac{K(n+1)}{100}$$

$$p21 = \frac{21(12+1)}{100} = \frac{21(13)}{100} = \frac{273}{100} = p21 = 2.73$$

$$p21 = 14 + (34 - 14)(0.73)$$

$$p21 = 14 + (20)(0.73)$$

$p21 = 14 + 14.6 = p21 = 28.6$

Solución p35

$$\frac{K(n+1)}{100},$$

$$p35 = \frac{35(12+1)}{100} = \frac{35(13)}{100} = \frac{455}{100} = p3 = 4.55$$

$$p35 = 47 + (49 - 47)(0.55)$$

$$p35 = 47 + (2)(0.5)$$

$$p35 = 47 + 1.1 = p35 = 48.1$$