

Medidas de Tendencia Central

15, 15, 15, 16, 17, 18, 19, 19, 20, 21, 23, 23, 24, 25, 25, 25, 28, 28, 29, 31, 32, 32, 32, 33, 33, 36, 41, 42, 43, 43

$$R = 43 - 15 = 28$$

$$k = 1 + 3.22 \log(30) = 5.90 = 6$$

$$h = \frac{28}{6} = 4.6 = 5$$

Clase	F	PM	f(PM)	F
15 - 20	8	17.5	140	8
20 - 25	5	22.5	112.5	13
25 - 30	6	27.5	165	19
30 - 35	6	32.5	213	25
35 - 40	1	37.5	37.5	26
40 - 45	4	42.5	170	30
	30		838	30

$$\text{Media} = \frac{838}{30} = 27.93 //$$

$$\text{Mediana} = \frac{Li + \frac{n}{2} - f_{(i-1)}}{f_{\text{mediano}}}$$

$$Me = \frac{25 + (15 + 13) \cdot 5}{6}$$

$$25 + 0.33 \cdot 5 = 25 + 1.65 = 26.65 //$$

$$Mo = Li + \frac{f_1}{f_1 + f_2} \cdot h = 15 + \frac{8}{8+5} \cdot 5 = 15 + \frac{8}{13} \cdot 5$$

$$15 + (0.72 \cdot 5) = 13.6 //$$

Medidas de Dispersión

2, 4, 6 y 8

$$\bar{x} = \frac{20}{4} = 5 // \quad s^2 = (2-5)^2 + (4-5)^2 + (6-5)^2 + (8-5)^2$$

$$s^2 = \frac{9 + 1 + 1 + 9}{3} = \frac{20}{3} = 6.66 //$$

$$s = \sqrt{6.66} = 2.58 //$$

Datos agrupados EN Intervalos

Cantidad de Cuadernos vendidos	Numero de días (f)	Punto Medio (Pm)	F * Pm	(Pm - \bar{x}) ²	F * (Pm - \bar{x}) ²
5 - 10	3	7.5	22.5	100	300
10 - 15	7	12.5	87.5	25	175
15 - 20	10	17.5	175	0	0
20 - 25	8	22.5	180	25	200
25 - 30	1	27.5	27.5	100	100
30 - 35	1	32.5	32.5	225	225
	30		$\frac{525}{30} = 17.5$		1,000

$$s^2 = \frac{1000}{30-1} = \frac{1000}{29} = 34.48$$

$$s = \sqrt{34.48} = 5.87$$

Medidas de Posición

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
25, 28, 30, 30, 35, 35, 36, 37, 37, 38, 40, 40, 40, 40, 40, 40, 41, 43, 48, 50

Determina:

$$Q_2 = \frac{2(20)}{4} = \frac{40}{4} = 10 = 38 //$$

$$D_7 = \frac{7(20)}{10} = \frac{140}{10} = 14 = 40 //$$

$$D_9 = \frac{9(20)}{10} = \frac{180}{10} = 18 = 43 //$$

$$P_{15} = \frac{15(20)}{100} = \frac{300}{100} = 3 = 30 //$$