



INDICE

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MAESTRO: MAGNER JOEL HERRERA

MATERIA: ESTADISTICA DESCRIPTIVA

***NOMBRE DEL TRABAJO: MEDIDAS DE TENDENCIA
CENTRAL***

GRADO: 3

GRUPO: "C"

FECHA DE ENTREGA: 12/07/2020

①

Media:

10, 8, 6, 4, 9, 7, 10, 9, 6

$$10 + 8 + 6 + 4 + 9 + 7 + 10 + 9 + 6 = 69 \quad \frac{69}{9} = 7.66$$

$$\bar{x} = 7.66$$

Mediana:

~~4, 6, 6, 7, 8, 9, 9, 10, 10~~

$$Me = 8$$

Moda

4, 6, 6, 7, 8, 9, 9, 10, 10
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Mo 6, 9 y 10

$$\bar{x} = 7.66$$

$$Me = 8$$

$$Mo = 6, 9 y 10$$

②

media

9, 3, 8, 8, 9, 8, 9, 18

$$9 + 3 + 8 + 8 + 9 + 8 + 9 + 18 = \frac{72}{8} = 9$$

$$\bar{X} = 9$$

Mediana:

~~3, 8, 8, 8, 9, 9, 9, 18~~

$$8 + 9 = \frac{17}{2} = 8.5$$

$$Me = 8.5$$

$$\bar{X} = 9$$

$$Me = 8.5$$

$$Mo = 8 \vee 9$$

Moda:

3, 8, 8, 8, 9, 9, 9, 18

$$Mo = 8 \vee 9$$

Agrupados Puntualmente

(3)

| X | f | F | X*f |
|-------|----|----|-----|
| 44 | 1 | 1 | 44 |
| 45 | 4 | 5 | 180 |
| 49 | 1 | 6 | 49 |
| 53 | 1 | 7 | 53 |
| 54 | 1 | 8 | 54 |
| 55 | 2 | 10 | 110 |
| 56 | 1 | 11 | 56 |
| 57 | 1 | 12 | 57 |
| Total | 12 | | 603 |

$$\bar{X} = 50.2$$

$$ME = 49$$

$$MO = 45$$

Media

$$\bar{X} = \frac{\sum X \cdot f}{n} = \frac{603}{12}$$

$$= \frac{603}{12} = 50.25$$

$$\bar{X} = 50.2 \text{ baterias}$$

mediana:

$$\text{Posición:} = \frac{n}{2} = \frac{12}{2} = 6$$

$$ME = 49 \text{ baterias}$$

Moda:

$$MO = 45 \text{ baterias}$$

Agrupados en intervalos

(A)

| No. visitas | X | f | F | X * f | |
|-------------|----|----|----|-------|-------------------|
| 1-3 | 2 | 2 | 2 | 4 | $\bar{X} = 11.77$ |
| 4-6 | 5 | 4 | 6 | 20 | Me = 11.28 |
| 7-9 | 8 | 13 | 19 | 104 | Mo = 10.96 |
| 10-12 | 11 | 25 | 44 | 275 | |
| 13-15 | 14 | 12 | 56 | 168 | |
| 16-18 | 17 | 9 | 65 | 153 | |
| 19-21 | 20 | 5 | 70 | 100 | |
| Total | | 70 | | 824 | |

$$\bar{X} = \frac{\sum Xf}{n}$$

$$\bar{X} = \frac{824}{70} = 11.77$$

$$\bar{X} = 11.77 \text{ visitas}$$

$$me = \frac{10 + 35 - 9}{2} \cdot 2$$

$$me = 10 + \frac{16}{2} \cdot 2$$

$$me = 10 + 1.28$$

$$me = 11.28$$

Mediana:

$$Me = L_i + \frac{\frac{n}{2} - F_{i-1}}{f_i} \cdot A_i$$

$$\text{Posición:} = \frac{n}{2} = \frac{70}{2} = 35$$

$$L_i = 10$$

$$F_{i-1} = 19$$

$$n = 70$$

$$f_i = 25$$

$$A_i = L_3 - L_1 = 2$$

Moda

$$mo = L_i + \frac{f_i - f_{i-1}}{(f_i - f_{i-1}) + (f_i - f_{i+1})} \cdot A_i$$

$$mo = 10 + \frac{12}{12 + 13} \cdot 2$$

$$mo = 10 + \frac{24}{25}$$

$$mo = 10 + 0.96 = 10.96$$