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Nombre del trabajo: ejercicios

Materia: Estadística Descriptiva

Grado: Tercer cuatrimestre

Grupo: LAE

Formula: $\bar{X} = \frac{\sum XF}{N}$

$$21 \times 1 = 21$$

$$22 \times 4 = 88$$

$$23 \times 3 = 69$$

$$24 \times 1 = 24$$

$$25 \times 1 = 25$$

$$= \frac{24 + 88 + 69 + 24 + 25}{10} = \frac{227}{10}$$

$$\bar{X} = \frac{227}{10} = 22.7$$

$$\bar{X} = 22.7$$

$$\sigma^2 = 1.21$$

$$\sigma = 1.1$$

$$CV = 4.847.$$

Varianza Formula:

$$\sigma^2 = \frac{\sum (X - \bar{X})^2 \cdot F}{N}$$

$$= \frac{\sum (X - \bar{X})^2}{N}$$

F

$$(21 - 22.7)^2 = 2.89 \times 1 = 2.89$$

$$(22 - 22.7)^2 = 0.49 \times 4 = 1.96$$

$$(23 - 22.7)^2 = 0.09 \times 3 = 0.27$$

$$(24 - 22.7)^2 = 1.69 \times 1 = 1.69$$

$$(25 - 22.7)^2 = 5.29 \times 1 = 5.29$$

$$\sigma^2 = \frac{12.1}{10}$$

$$1.21$$

$$\sigma^2 = 1.21$$

Desviacion estandar

$$\sigma = \sqrt{1.21}$$

$$\sigma = 1.1$$

Coefficiente de varianza

$$CV = \frac{\sigma}{\bar{X}}$$

$$CV = \frac{1.1}{22.7} = 0.0484 \times 10$$

$$CV = 4.847.$$

$$\text{Formula} = \bar{x} = \frac{\sum x \cdot f}{n}$$

x · f

$$4 \times 1 = 4$$

$$8 \times 4 = 32$$

$$12 \times 10 = 120$$

$$16 \times 3 = 48$$

$$20 \times 2 = 40$$

$$= \frac{4 + 32 + 120 + 48 + 40}{20} = \frac{244}{20}$$

$$\bar{x} = \frac{244}{20} = 12.2$$

Formula para
varianza

$$\sigma^2 = \frac{\sum (x - \bar{x})^2 \cdot f}{n}$$

$$\bar{x} = 12.2$$

$$\sigma^2 = 15.16$$

$$f = 3.89$$

$$cv = 31.88\%$$

$$(x - \bar{x})^2$$

$$(4 - 12.2)^2 = 67.24 \times 1 = 67.24$$

$$(8 - 12.2)^2 = 17.64 \times 4 = 70.56$$

$$(12 - 12.2)^2 = 0.04 \times 10 = 0.4$$

$$(16 - 12.2)^2 = 14.44 \times 3 = 43.32$$

$$(20 - 12.2)^2 = 60.84 \times 2 = \frac{121.68}{303.2}$$

$$\sigma^2 = \frac{303.2}{20}$$

$$\sigma^2 = 15.16$$

Desviación estandar

$$\sigma = \sqrt{15.16}$$

$$\sigma = 3.89$$

Coefficiente de varianza

$$cv = \frac{\sigma}{\bar{x}}$$

$$cv = \frac{3.89}{12.2} = 0.3180 \times 100 = 31.88\%$$

Formula: $\bar{x} = \frac{\sum x_i}{n}$

$$\frac{2+2+4+4+5+5+6}{7} = \frac{28}{7}$$

$$\bar{x} = 4 \text{ años}$$

$$\sigma^2 = 2 \text{ años}$$

$$\sigma = 1.41 \text{ años}$$

$$CV = 35.25\%$$

Formula para Varianza

$$\sigma^2 = \frac{\sum (x_i - \bar{x})^2}{n}$$

$$\frac{(2-4)^2 + (2-4)^2 + (4-4)^2 + (4-4)^2 + (5-4)^2 + (5-4)^2 + (6-4)^2}{7}$$

$$\sigma^2 = \frac{(2)^2 + (2)^2 + (0)^2 + (0)^2 + (1)^2 + (1)^2 + (2)^2}{7}$$

$$\sigma^2 = \frac{4+4+0+0+1+1+4}{7}$$

$$\sigma^2 = \frac{14}{7} = 2$$

Formula para Desviación estandar

$$\sigma = \sqrt{2}$$

$$\sigma = 1.41$$

Formula para Coeficiente de variación

$$CV = \frac{\sigma}{\bar{x}} = \frac{1.41}{4} = 0.3525$$

$$CV = .35 \times 100 = 35.25\%$$