

De 20 estudiantes tenemos sus evaluaciones de un examen
 con las calificaciones A, D, P.

5 5 8 7 9 10 7 6 8 9 10 10 8 7 6 5 9 6 7 8
 5 5 5 6 6 6 7 7 7 7 8 8 8 8 8 9 9 10 10 10

$A = \frac{1 \times 20}{4}$ $D = \frac{5 \times 20}{10}$ $P = \frac{75 \times 20}{100}$

$A = 5$ $D = 10$ $P = 15$

De la sig tabla de frecuencias con las calificaciones A, D, P.

| Edad | x_i | f_i | F_i |
|-------|-------|-------|-------|
| 10-19 | 14.5 | 5 | 5 |
| 19-28 | 23.5 | 11 | 16 |
| 28-37 | 32.5 | 8 | 24 |
| 37-46 | 41.5 | 5 | 29 |
| 46-55 | 50.5 | 8 | 37 |
| 55-64 | 59.5 | 6 | 43 |
| 64-73 | 68.5 | 7 | 50 |

$A = \frac{2 \times 50}{4} = 28 + \frac{37-5}{8} = 16.9$

$A = 25$

$A = 46.5$

$D = \frac{65 \times 50}{100} = 32.5$

$P = 28 + \frac{32.5-16}{8} = 28 + 2.06 = 30.06$

$P = 28 + \frac{16.5}{8} = 28 + 2.06 = 30.06$

$P = 28 + \frac{148.5}{8} = 28 + 18.56 = 46.56$

$P = 28 + 18.5 = 46.5$

$P = 46.5$

$D = \frac{8 \times 50}{10} = 40$

$D = 37 + \frac{4.5-24}{5} = 37 - 3.8 = 33.2$

$D = 37 + \frac{17.5}{5} = 37 + 3.5 = 40.5$

$D = 37 + \frac{157.5}{5} = 37 + 31.5 = 68.5$

$D = 37 + 31.5 = 68.5$



Calcular la variancia y la desviacion estandar de los sig datos muestrales: 6, 8, 7, 10, 3, 5, 9, 8

$$\begin{array}{l} (56)^2 = 3136 \\ (3 \times 1)^2 = 428 \end{array} \quad \begin{array}{l} 5^2 = 428 \\ \hline 8-1 \\ \hline 8 \end{array} \quad \begin{array}{l} \text{varianza} \\ \underline{5^2 = 5.14} \end{array}$$

$$5^2 = \frac{428 - 392}{7}$$

$$\begin{array}{l} \text{Desviacion} = \sqrt{5.14} \\ = 2.26 \end{array}$$

De la misma tabla de frecuencias anterior, determinar Variancia y desviacion estandar

| Edad | X_i | f_i | F_i | $X_i - \bar{X}$ | $(X_i - \bar{X})^2$ | $(X_i - \bar{X})^2 R$ | \bar{X} |
|-------|-------|-------|-------|-----------------|----------------------------|-----------------------|-----------|
| 10-19 | 14.5 | 5 | 5 | 14.5-41 = -26.5 | 26.5 ² = 702.25 | | 72.5 |
| 19-28 | 23.5 | 11 | 16 | 23.5-41 = -17.5 | 17.5 ² = 306.25 | | 258.5 |
| 28-37 | 32.5 | 8 | 24 | 32.5-41 = -8.5 | 8.5 ² = 72.25 | | 260 |
| 37-46 | 41.5 | 5 | 29 | 41.5-41 = 0.5 | 0.5 ² = 0.25 | | 207.5 |
| 46-55 | 50.5 | 8 | 37 | 50-41 = 9.5 | 9.5 ² = 90.25 | | 404 |
| 55-64 | 59.5 | 6 | 43 | 59.5-41 = 18.5 | 18.5 ² = 342.25 | | 357 |
| 64-73 | 68.5 | 7 | 50 | 68.5-41 = 27.5 | 27.5 ² = 756.25 | | 479.5 |

$$\begin{array}{r} 2639 \\ 50 \\ \hline = 49.78 \end{array}$$