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**Nombre del trabajo: Actividad 1-  
ejercicio.**

**Materia: Estadística.**

**Grado: 2 cuatrimestre.**

# ESTADÍSTICA...

Karol Shelyn Pérez Pérez

1. Los datos que se dan a continuación corresponden a los pesos en Kgr. de ochenta personas:

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 60 | 66 | 77 | 70 | 66 | 68 | 57 | 70 | 66 | 52 | 75 | 65 | 69 | 71 | 58 | 66 | 67 | 74 | 61 | 63 |
| 69 | 80 | 59 | 66 | 70 | 67 | 78 | 75 | 64 | 71 | 81 | 62 | 64 | 69 | 68 | 72 | 85 | 56 | 65 | 74 |
| 67 | 54 | 65 | 65 | 69 | 61 | 67 | 73 | 57 | 62 | 67 | 68 | 63 | 67 | 71 | 68 | 76 | 61 | 62 | 63 |
| 76 | 61 | 67 | 67 | 64 | 72 | 64 | 73 | 79 | 58 | 67 | 71 | 68 | 59 | 69 | 70 | 66 | 62 | 63 | 66 |

# ACTIVIDAD 1

$$Fr = f_i / N$$

| Kg | Frecuencia Absoluta (fi) | Frecuencia Acumulada (Fi) | Frecuencia Relativa (fr) | Frecuencia Relativa Acumulada (Fr) |
|----|--------------------------|---------------------------|--------------------------|------------------------------------|
| 52 | 1                        | 1                         | 0.0125                   | 0.0125                             |
| 54 | 1                        | 2                         | 0.0125                   | 0.025                              |
| 56 | 1                        | 3                         | 0.0125                   | 0.0375                             |
| 57 | 2                        | 5                         | 0.025                    | 0.0625                             |
| 58 | 2                        | 7                         | 0.025                    | 0.0875                             |
| 59 | 2                        | 9                         | 0.025                    | 0.1125                             |
| 60 | 1                        | 10                        | 0.0125                   | 0.125                              |
| 61 | 4                        | 14                        | 0.05                     | 0.175                              |
| 62 | 4                        | 18                        | 0.05                     | 0.225                              |
| 63 | 4                        | 22                        | 0.05                     | 0.275                              |
| 64 | 4                        | 26                        | 0.05                     | 0.325                              |
| 65 | 4                        | 30                        | 0.05                     | 0.375                              |
| 66 | 7                        | 37                        | 0.0875                   | 0.4625                             |
| 67 | 9                        | 46                        | 0.1125                   | 0.575                              |
| 68 | 5                        | 51                        | 0.0625                   | 0.6375                             |
| 69 | 5                        | 56                        | 0.0625                   | 0.7                                |
| 70 | 4                        | 60                        | 0.05                     | 0.75                               |
| 71 | 4                        | 64                        | 0.05                     | 0.8                                |
| 72 | 2                        | 66                        | 0.025                    | 0.825                              |

Norma

$$Fr = fi / N$$

| Kg | Frecuencia Absoluta (fi) | Frecuencia Acumulada (Fi) | Frecuencia Relativa (fr) | Frecuencia Relativa Acumulada (Fr) |
|----|--------------------------|---------------------------|--------------------------|------------------------------------|
| 73 | 2                        | 68                        | 0.025                    | 0.85                               |
| 74 | 2                        | 70                        | 0.025                    | 0.875                              |
| 75 | 2                        | 72                        | 0.025                    | 0.9                                |
| 76 | 2                        | 74                        | 0.025                    | 0.925                              |
| 77 | 1                        | 75                        | 0.0125                   | 0.9375                             |
| 78 | 1                        | 76                        | 0.0125                   | 0.95                               |
| 79 | 1                        | 77                        | 0.0125                   | 0.9625                             |
| 80 | 1                        | 78                        | 0.0125                   | 0.975                              |
| 81 | 1                        | 79                        | 0.0125                   | 0.9875                             |
| 83 | 1                        | 80                        | 0.0125                   | 1                                  |

$$F\% = fr * 100$$

$$G = fr * 360$$

| Frecuencia<br>% (f%) |    | Frecuencia<br>%<br>Acumulada (F%) |    | Grados |   | Grados<br>Acumulados |   |
|----------------------|----|-----------------------------------|----|--------|---|----------------------|---|
| 1.                   | 25 | 1.                                | 25 | 4.     | 5 | 4.                   | 5 |
| 1.                   | 25 | 2.                                | 50 | 4.     | 5 | 9.                   |   |
| 1.                   | 25 | 3.                                | 75 | 4.     | 5 | 13.                  | 5 |
| 2.                   | 5  | 6.                                | 25 | 9.     |   | 22.                  | 5 |
| 2.                   | 5  | 8.                                | 75 | 9.     |   | 31.                  | 5 |
| 2.                   | 5  | 11.                               | 25 | 9.     |   | 40.                  | 5 |
| 1.                   | 25 | 12.                               | 50 | 4.     | 5 | 45.                  |   |
| 5.                   | -  | 17.                               | 5  | 18.    |   | 63.                  |   |
| 5.                   | -  | 22.                               | 5  | 18.    |   | 81.                  |   |
| 5.                   | -  | 27.                               | 5  | 18.    |   | 99.                  |   |
| 5.                   | -  | 32.                               | 5  | 18.    |   | 117.                 |   |
| 5.                   | -  | 37.                               | 5  | 18.    |   | 135.                 |   |
| 8.                   | 75 | 46.                               | 25 | 31.    | 5 | 166.                 | 5 |
| 11.                  | 25 | 57.                               | 5  | 40.    | 5 | 207.                 |   |
| 6.                   | 25 | 63.                               | 75 | 22.    | 5 | 229.                 | 5 |
| 6.                   | 25 | 70.                               |    | 22.    | 5 | 252.                 |   |
| 5.                   |    | 75.                               |    | 18.    |   | 270.                 |   |
| 5.                   |    | 80.                               |    | 18.    |   | 288.                 |   |
| 2.                   | 5  | 82.                               | 5  | 9.     |   | 297.                 |   |

Norma

$$f\% = f_r * 100$$

$$G = f_r * 360$$

| Frecuencia<br>% (f%) |    | Frecuencia<br>%<br>Acumulada (f%) | Grados | Grados<br>Acumulados |
|----------------------|----|-----------------------------------|--------|----------------------|
| 2                    | 5  | 85                                | 9      | 306                  |
| 2                    | 5  | 87                                | 9      | 315                  |
| 2                    | 5  | 90                                | 9      | 324                  |
| 2                    | 5  | 92                                | 9      | 333                  |
| 1                    | 25 | 93                                | 4      | 337                  |
| 1                    | 25 | 95                                | 4      | 342                  |
| 1                    | 25 | 96                                | 4      | 346                  |
| 1                    | 25 | 97                                | 4      | 351                  |
| 1                    | 25 | 98                                | 4      | 355                  |
| 1                    | 25 | 100                               | 4      | 360                  |

e

# FORMULA!

## MEDIA

$$X = x_1 \cdot f_1 + x_2 \cdot f_2 + x_n \cdot f_n / N$$

$$\begin{aligned}
X = & (52 \cdot 1) + (54 \cdot 1) + (56 \cdot 1) + (57 \cdot 2) + \\
& (58 \cdot 2) + (59 \cdot 2) + (60 \cdot 1) + (61 \cdot 4) + \\
& (62 \cdot 4) + (63 \cdot 4) + (64 \cdot 4) + (65 \cdot 4) + \\
& (66 \cdot 7) + (67 \cdot 9) + (68 \cdot 5) + (69 \cdot 5) + \\
& (70 \cdot 4) + (71 \cdot 4) + (72 \cdot 2) + (73 \cdot 2) + \\
& (74 \cdot 2) + (75 \cdot 2) + (76 \cdot 2) + (77 \cdot 1) + \\
& (78 \cdot 1) + (79 \cdot 1) + (80 \cdot 1) + (81 \cdot 1) + \\
& (83 \cdot 1) / 80
\end{aligned}$$

$$\begin{aligned}
X = & (52 + 54 + 56 + 114 + 116 + 118 + \\
& 60 + 244 + 248 + 252 + 256 + \\
& 260 + 462 + 603 + 340 + 345 + 280 + \\
& 284 + 144 + 146 + 148 + 150 + \\
& 152 + 77 + 78 + 79 + 80 + 81 + 83)
\end{aligned}$$

80

$$X = 5,362 / 80$$

$$X = 67.025$$

## MEDIANA

$$Md = (N+1)/2$$

$$Md = (80+1)/2$$

$$Md = 81/2$$

$$Md = 81/2$$

$$Md = 40.5$$

## MODA

67



## ACTIVIDAD 2

Dada la distribución siguiente, constrúyase una tabla estadística en la que aparezcan las frecuencias absolutas, las frecuencias relativas y las frecuencias acumuladas relativas crecientes.

$$Fr = Fi/N$$

| EDADES | Frecuencia Relativa (fi) | Frecuencia Acomulada (Fi) | Frecuencia Relativa (fr) | Frecuencia Relativa Acomulada |
|--------|--------------------------|---------------------------|--------------------------|-------------------------------|
| 1      | 5                        | 5                         | 0.125                    | 0.125                         |
| 2      | 7                        | 12                        | 0.175                    | 0.3                           |
| 3      | 9                        | 21                        | 0.225                    | 0.525                         |
| 4      | 6                        | 27                        | 0.15                     | 0.675                         |
| 5      | 14                       | 34                        | 0.175                    | 0.85                          |
| 6      | 6                        | 40                        | 0.15                     | 1                             |

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