**Medidas de tendencia central.**

**Media, mediana y moda.**

**Media: El valor obtenido al sumarse todos los datos y dividir el resultado entre el número total.**

**16 15 14 17 15 17**

**14 15 15 16 17 17 = 94/6 x = 15.66**

**Mediana: Es el valor que ocupa el lugar centrar de todos los datos cuando están ordenados.**

**16 15 14 17 15 17 17**

**14 15 15 16 17 17 17 Me = 16**

**14 15 15 16 17 17 15+16/2 Me = 15.5**

**Moda: El o los valores que más se repiten.**

**16 15 14 17 15 15 17 17**

**14 15 15 15 16 17 17 Mo = 15**

**14 15 15 15 16 17 17 17 Mo = 15 , 17 bimodal**

**13 13 13 14 15 15 15 16 17 17 17 Mo = 13, 15 ,17 multimodal**

|  |  |  |  |
| --- | --- | --- | --- |
| **X Edades** | **Fi** | **F** | **X\*Fi** |
| ***13*** | **3** | **3** | **39** |
| ***14*** | **14** | **17** | **196** |
| ***15*** | **23** | **40** | **345** |
| ***16*** | **10** | **50** | **160** |
| ***17*** | **5** | **55** | **85** |
| ***18*** | **4** | **59** | **72** |
| ***19*** | **1** | **60** | **19** |
|  | **60** |  | **916** |

X = X= 916/60

x= 15.26 años

Me = 15

Posición = n/2 F

60/2 = 30 -- El siguiente

Par = n/2

Impar = n+1 / 2

Mo = 15

|  |  |  |  |
| --- | --- | --- | --- |
| **X Hermanos** | **Fi** | **F** | **X\*f** |
| **0** | **5** | **5** | **0** |
| **1** | **12** | **17** | **12** |
| **2** | **10** | **27** | **20** |
| **3** | **8** | **35** | **24** |
| **4** | **6** | **41** | **24** |
| **5** | **4** | **45** | **20** |
| **6** | **3** | **48** | **18** |
| **7** | **2** | **50** | **14** |
|  | **50** |  | **132** |

X =

x=132/50

x = 2.64

Me= 2

Posición = 50/ 2 = 25 F

Par = n/2

Impar = n+1 / 2

**Mo= 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Edades | Xi | fi | F | X\*fi |
| 13-15 | 14 | 4 | 4 | 56 |
| 15-17 | 16 | 9 | 13 | 144 |
| 17-19 | 18 | 3 | 16 | 54 |
| 19-21 | 20 | 3 | 19 | 60 |
| 21-23 | 22 | 1 | 20 | 22 |
|  |  | 20 |  | 336 |

X =

Mo =

Mo =

Mo =

Mo =

Mo =

Mo =

Mo = años

336/20 = 16.8 años

X=16.8 años

Posición = 20/2 = 10 F

z

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| peso | Xi | fi | F | Xi\*fi |
| 49-53 | 51 | 3 | 3 | 153 |
| 53-57 | 55 | 6 | 9 | 330 |
| 57-61 | 59 | 8 | 17 | 472 |
| 61-65 | 63 | 9 | 26 | 567 |
| 65-69 | 67 | 4 | 30 | 268 |
|  |  | 30 |  | 1790 |

X =

Mo =

Mo =

Mo =

Mo =

Mo =

Mo =

Mo =

X=1790/30 =59.66 kg

Posición= 30/2 =15 F

Medidas de dispersión

Rango

**Varianza**

**Desviación estándar**

Varianza muestra

Varianza poblaciones

**Edades: 5, 6 , 6 , 7 , 8**

32/5 = 6.4

1.04

Desviación estándar

1.04

1.01

|  |  |  |
| --- | --- | --- |
| xi |  |  |
| 5 |  |  |
| 6 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
|  |  |  |

**Varianza**

**Desviación estándar**

Varianza muestra

Varianza poblaciones

Datos: 12,6,7,10,11,12,6,11,14,11

100/10 =10

6.8

Desviación estándar

6.8

2.6076

|  |  |  |
| --- | --- | --- |
| xi |  |  |
| 12 | 2 | 4 |
| 6 | -4 | 16 |
| 7 | -3 | 9 |
| 10 | 0 | 0 |
| 11 | 1 | 1 |
| 12 | 2 | 4 |
| 6 | -4 | 16 |
| 11 | 1 | 1 |
| 14 | 4 | 16 |
| 11 | 1 | 1 |
| 100 |  |  |