

$$X_i \cdot f_i = (7 \times 1) + (19 \times 3) + (31 \times 5) + (43 \times 24) + (55 \times 21) + (67 \times 10) + (79 \times 5) + (91 \times 1) \\ = 4132$$

| I. clase | $X_i$      | $f_i$ | $F_i$      | $F_{ri}$      | $F_{ri}$         |
|----------|------------|-------|------------|---------------|------------------|
| 1-13     | $1+13/2=7$ | 11    | 11         | $11/100=0.11$ | 0.11             |
| 13-25    | 19         | 13    | $11+13=24$ | 0.13          | $0.11+0.13=0.24$ |
| 25-37    | 31         | 15    | 39         | 0.15          | $0.24+0.15=0.39$ |
| 37-49    | 43         | 24    | 63         | 0.24          | 0.63             |
| 49-61    | 55         | 21    | 84         | 0.21          | 0.84             |
| 61-73    | 67         | 10    | 94         | 0.10          | 0.94             |
| 73-85    | 79         | 5     | 99         | 0.05          | 0.99             |
| 85-97    | 91         | 1     | 100        | 0.01          | 1.00             |
|          |            | 100   |            |               |                  |

$F_{pi}$

|     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 11% | 1  | 2  | 3  | 5  | 6  | 8  | 9  | 10 | 11 | 11 | 12 | 14 | 15 | 15 | 16 | 17 | 18 | 18 |
| 13% | 19 | 20 | 21 | 21 | 22 | 22 | 25 | 25 | 26 | 28 | 29 | 29 | 30 | 31 |    |    |    |    |
| 15% | 31 | 32 | 32 | 33 | 35 | 35 | 36 | 37 | 37 | 38 | 39 | 40 | 40 | 41 | 41 |    |    |    |
| 24% | 41 | 41 | 42 | 43 | 43 | 43 | 43 | 44 | 44 | 44 | 46 | 46 | 47 | 47 | 47 |    |    |    |
| 21% | 48 | 48 | 49 | 49 | 49 | 51 | 51 | 51 | 52 | 52 | 56 | 57 | 58 | 59 | 59 |    |    |    |
| 10% | 59 | 60 | 60 | 61 | 62 | 63 | 64 | 65 | 65 | 67 | 68 | 69 | 70 | 71 |    |    |    |    |
| 5%  | 71 | 73 | 74 | 80 | 81 | 82 | 84 | 92 |    |    |    |    |    |    |    |    |    |    |
| 1%  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Numero Mayor = 92 ✓

Numero menor = 1 ✓

Rango =  $\text{maximo} - \text{minimo} = 92 - 1 = 91$

Intervalos =  $K = 1 + 3.222 \log(n)$

$$K = 1 + 3.222 \log(100)$$

$$K = 7.644 \rightarrow 8$$

$$K = 8$$

$$[1, 1+12) = [1, 13]$$

$$[13, 13+2) = [13, 25]$$

$$= [25, 37]$$

$$[37, 49]$$

$$[46, 61]$$

$$[61, 73]$$

$$[73, 85]$$

$$[85, 97]$$

$$\text{Amplitud} = A = \frac{\text{Rango}}{\text{intervalo} \rightarrow k} = \frac{91}{8} = 11.375 \text{ (12)}$$

$$\text{Media} = \bar{X} = \frac{\sum (X_i \cdot f_i)}{n}$$

$\nearrow$  clase de intervalo       $\nearrow$  frecuencia absoluta  
 $\nearrow$  Num. total de datos =

$$\bar{X} = \frac{4132}{100} = 41.32$$

$$\text{Mediana} = L_i + \left( \frac{\frac{n}{2} - F_{i-1}}{f_i} \right) \cdot A$$

$\nearrow$  frecuencia acumulada del intervalo anterior  
 $\nearrow$  amplitud  
 $\nearrow$  frecuencia absoluta  
 Limite inferior

$$\frac{n}{2} = \frac{100}{2} = 50$$

$$37 + \frac{(50 - 39) (12)}{24} = 42.5$$

$$L_i = 37$$

$$F_{i-1} = 39$$

$$f_i = 24$$

$$A = 12$$

$$\text{Moda} = M_o = L_i + \left( \frac{d_1}{d_1 + d_2} \right) \cdot A$$

$\nearrow$  Limite inferior modal  
 $\nearrow$  diferencia entre la frecuencia de la clase modal y la frecuencia de la clase anterior

diferencia entre la frecuencia de la modal y la frecuencia de la clase posterior

$$f_i = 24$$

$$L_i = 37$$

$$f_{\text{modal}} = 24$$

$$f_{\text{anterior}} = 15$$

$$f_{\text{posterior}} = 21$$

$$d_1 = f_{\text{modal}} - f_{\text{anterior}} = 24 - 15 = 9$$

$$d_2 = f_{\text{modal}} - f_{\text{posterior}} = 24 - 21 = 3$$

$$M_o = 37 + \left( \frac{9}{9+3} \right) (12) = 46$$

$$\% = \frac{f_i}{n} \times 3.6 = 39.6^\circ$$

$$46.8^\circ$$

$$54^\circ$$

$$86.4^\circ$$

$$75.6^\circ$$

$$36^\circ \quad 18^\circ \quad 3.6^\circ$$

