N=27

2│0133367799 (10)

3│01111223333355789 (17)

Mean= 30.19; Med= 31; Md=33 skewed left

∑x2 = 25265; (∑x)2 = 664225

Q1= 27; Q3= 33; IQR= 6;

s= 5.05;

N=36;

* X| 7
* 1|147889(6)
* 2|244689(6)
* 3|11122223333444567799 (20)
* 4|002(3)

Mean= 29.36; Med= 32; Md=32,33 skewed left

∑x2 = 33669; (∑x)2 = 1117249

Q1= 24; Q3= 34; IQR= 10; outliers: 24-1.5(10)= 9; yes outlier 7;

34 +1.5(10)=49;no outliers

s= 8.68;

Freq Cumm Freq Rel.Freq Cumm. Rel Freq

7-12 2 2 .056 (2/36) .056

13-18 4 6 .111 (4/36) .167 (.056+.111)

19-24 4 10 .111 (4/36) .278 (.167+.111)

25-30 3 13 .083 (3/36 .361 (.278 +.083)

31-36 16 29 .444 (16/36) .805 (.361+.444)

37-42 7 36 .194 (7/36) .999 (.805+.194)

Sqrt n= sqrt 36=6; range=35/#of intervals= 35/6=5.83; 6 interval width;

## Correlation Problem: Five pairs of Scores

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | x | y | ∑X | (∑x)2 | ∑x2 | ∑y | (∑y)2 | ∑y2 | ∑xy |
|  |  |  |  |  |  |  |  |  |  |
|  | 1 | 3 | 1 |  | 12 | 3 |  | 32 | 1(3) |
|  | 3 | 4 | 3 |  | 32 | 4 |  | 42 | 3(4) |
|  | 5 | 7 | 5 |  | 52 | 7 |  | 72 | 5(7) |
|  | 2 | 1 | 2 |  | 22 | 1 |  | 12 | 2(1) |
|  | 4 | 4 | 4 |  | 42 | 4 |  | 42 | 4(4) |
|  |  |  |  |  |  |  |  |  |  |
| Totals |  |  | 15 | (15)2=225 | 55 | 19 | (19)2=361 | 91 | 68 |
|  |  |  |  |  |  |  |  |  |  |

Using Correlation Formula (i.e., Pearson’s r)

5(68) – (15) (19)

Sqrt [5(55) – 225] [ 5(91) – 361]

Solving

Numerator = 55

Denominator= 68.56

55/68.56= .80; strong, direct correlation between x and y; use variable names when appropriate in interpreting correlation. EX: strong, direct association between drinking beers (x) and running to the bathroom (y)