

Problem List, Week 2

Descriptive Statistics

1. The data on the number of failures of certain power plants are given in the following frequency table.

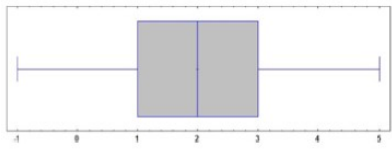
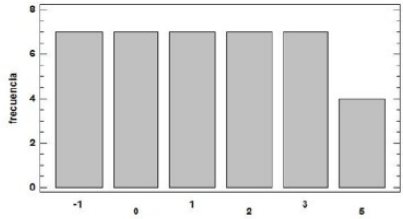
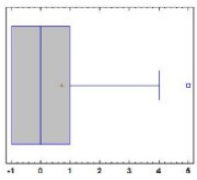
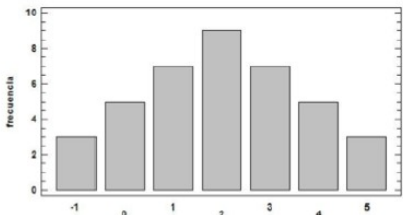
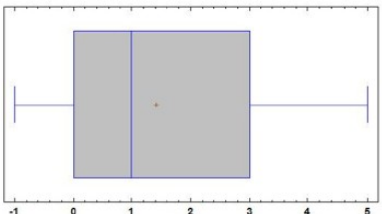
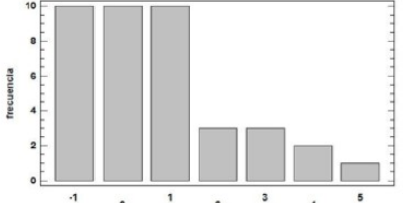
	Absolute frequency	Relative frequency	Cumulative frequency	Cumulative relative frequency
0	26			
1				0.5
2			64	
3			74	
4		0.025		
5			80	

- a) Calculate the missing values.
 - b) Calculate the median, first quartile and third quartile
 - c) Draw the box-plot
2. A small association has 25 subscribers who contribute, each month, with the following fees on a voluntary basis (in euros)

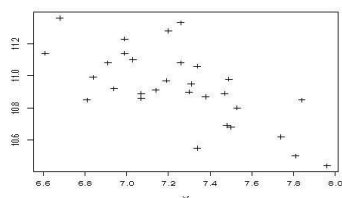
fee	Number of subscribers
5	3
6	2
10	8
25	9
30	2
50	1

- (a) Calculate the mean, the median, first quartile and third quartile
- (b) Calculate the coefficient of variation
- d) Draw the box-plot.

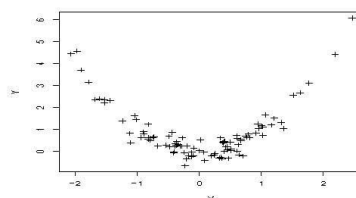
3. The following graphs show the box-plots and histograms of three different data samples. The box-plots of these samples are identified with the labels BP1, BP2, BP3, respectively, while the histograms are identified as C1, C2 and C3. Relate each bar graph to a box-plot.

BP1			C1
BP2			C2
BP3			C3

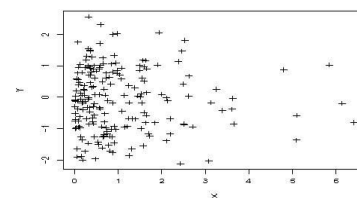
4. Given the following three scatter plots



Gráfica A



Gráfica B



Gráfica C

Determine the sign of the covariance and the correlation for each graph and say whether the variables represented are independent or not.