Badji Mokhtar University - Annaba
Faculty of Technology

Common Core Technology Science Department

Exercises Sheet n°01 (Statistical series with one character)

Exercise 1. Specify the nature of the following characters: diameter of a wheel, number of rooms in an apartment, blood group, student height, age, family situation, numbers of defective parts, car type, eye color, weight, student grades.

Exercise 2. A study concerning the number of workers in 35 small businesses gave the following statistical series

4 9 1 3 3 5 2 4 4 1 13 10 5 5 9 2 5 6 4 5 5 13 10 3 5 9 5 8 8 4 5 5 10 4 10.

1. Define population and character and what is its type.
2. Construct the statistical table for this series.
3. Complete the table with the increasing and decreasing cumulative effective.
4. Determine the mode; calculate the mean, variance, standard deviation and quartiles of this series.
5. Plot the bars diagram, the polygons of the totals and the increasing and decreasing cumulative absolute frequency curve.

Exercise 3. The marks obtained by 100 students in an exam are as follows:

Mark	Center (X_i)	(n_i)
[0, 2[	1	3
[2, 4[	3	2
[4, 6[	5	15
[6, 8[	7	14
[8, 10[	9	20
[10, 12[	11	23
[12, 14[	13	12
[14, 16[	15	5
[16, 18[	17	5
[18, 20[	19	1
Total		N = 100

1. Define population and character and what is its type.
2. Complete the table with the increasing and decreasing cumulative effective.
3. Determine the mode; calculate the mean, variance, standard deviation and quartiles of this series.
4. Plot the bar chart, and the increasing and decreasing cumulative absolute frequency curve.

Exercise 4. We measured the temperature (in °C) recorded each day in a given city throughout the month of January and we obtained the following results:
12.5 – 14.2 – 15.6 – 14.5 – 13.3 – 11.9 – 10.7 – 10.4 – 9.9 – 9.4 – 10.8 – 14.9 – 15.6 – 15.8 – 14.3 – 13.6 – 12.9 – 13.6 – 16.2 – 16.8 – 17.6 – 17 – 15.3 – 14.2 – 12.6 – 11.8 – 11.4 – 10.2 – 10.0 – 9.1 – 8.8.

1. Define population and character and what is its type.
2. Construct the statistical table for this series.
3. Determine the mode; calculate the mean and variance.