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**R Assignment**

The number of plants planted on the plots of a housing estate was counted. The data obtained is as follows:

1, 2, 4, 1, 6, 3, 2, 1, 2, 0, 1, 2, 2, 1, 3, 0, 3, 2, 1, 2, 2, 3, 2, 3

1. Enter this data in the form of a vector named trees and display this vector:

Graphical user interface, text, application, email

Description automatically generated

2. Sort the values of this vector in ascending order.

Table

Description automatically generated

3. Give the sample size (ie the number of features of this vector) by denoting it n and display its value:

Graphical user interface, text, application, email

Description automatically generated

4. Show the table of frequencies and percentages.

Table

Description automatically generated

5. Calculate and display cumulative counts and cumulative frequencies.

Text, table

Description automatically generated with medium confidence

6. Calculate the average number of trees per plot. Graphical user interface, text, application

Description automatically generated

7. Calculate the maximum and minimum number of trees on a plot.

Graphical user interface, text, application, email

Description automatically generated

8. Calculate the median number of trees per plot.

Graphical user interface, application

Description automatically generated

9. Use the summary() function to obtain a summary table of indicators.

Table

Description automatically generated

10. Calculate the variance of the number of trees planted on the plots.

Graphical user interface, text, application

Description automatically generated

11. Now calculate the standard deviation and verify that the standard deviation is the square root of the variance.

Graphical user interface, text, application, email

Description automatically generated

12. The plot() function displays by default a cloud of points with the abscissa number of the observation (here from 1 to 24)and the ordinate the number of trees. Test this function. Modify the title of the figure, the names of the axes, the color and the shape of the points displayed.

Chart, scatter chart

Description automatically generated

13. Display the cumulative frequency curve. (Use the ecdf() function)

Chart, box and whisker chart

Description automatically generated

14. Plot a bar chart using the barplot() function from the effective or frequency table.

Chart, histogram

Description automatically generated