

STATISTICS AND GEOGEBRA

Part I

Location measures, dispersion and box plot

We will use GeoGebra to analyze the following data:

104, 52, 88, 78, 100, 72, 63, 80, 76, 108, 86, 80, 66, 73, 78

We will find:

- Median
- Mode
- Average
- Standard deviation
- Lower and upper quartile

To make a list of data in GeoGebra, we use curly brackets { }.

We write the following in the input field:

 Command ...

GeoGebra automatically provides the list named "List1". If you want a different name, you must give the list a name in the input field as shown below.

 Command ...

Analyzing the data sample

In the input bar we write one of the following commands:

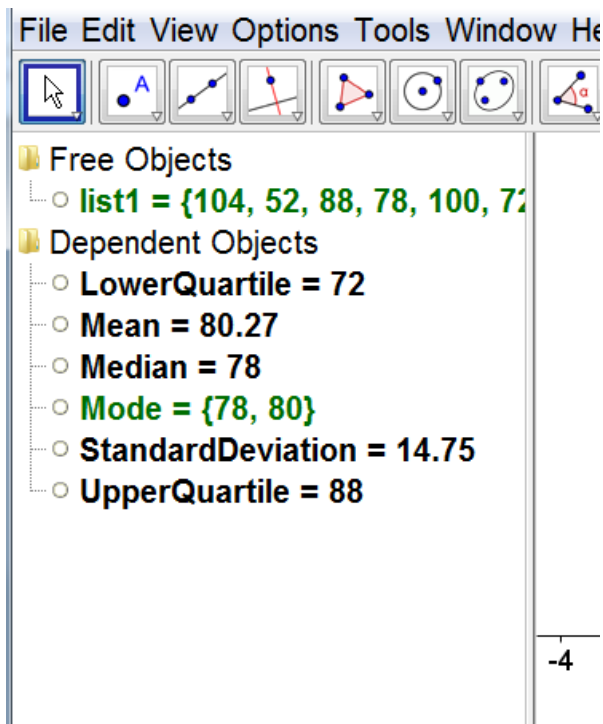
Measure of location and dispersion	Command
Median	Median[list1]
Mode	Mode[list1]
Mean	Mean[list1]
Standard deviation	SD[list1]
Lower quartile	Q1[list1]
Upper quartile	Q3[list1]

Tip

It is wise to name the different values so that they are easily recognizable in the algebra field. We write the following in the algebra view to find the median:

 Command ...

This is how it looks when all the values are named (note that all names must be written without any space):



Box Plot

It's easy to make a box plot with GeoGebra.

The command is `Boxplot[yOffset, yScale, list of raw data]`. "yOffset" gives the position of the box plot in the coordinate system, "yScale" determines the height of the box plot.

Our raw data gives the following box plot:

