Simple data analysis in R

math612.1 612.1 Numbers, arithmetic and algebra

Gunnar Stefansson (editor) with contributions from very many students
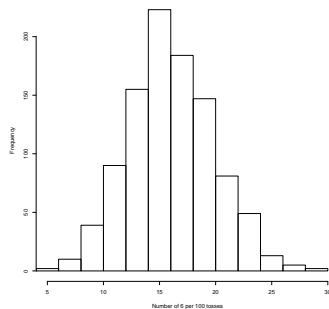
September 3, 2018

Entering data; dataframes

Several methods exist to enter data into R:

1. Enter directly: x<-c(4,3,6,7,8)

2. Read in a single vector: x<-scan("filename")

3. Use: x<-read.table("file address")
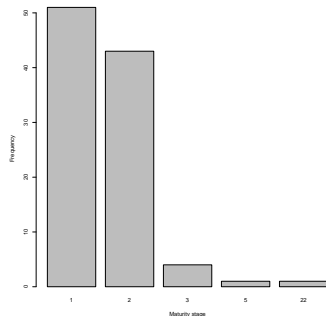
Example: Three methods to enter data into R.

Histograms

A histogram is a graphical display of tabulated frequencies, shown as bars.
In R use the command: hist()

Bar Charts

The bars in a bar chart usually correspond to frequencies in categories and are therefore kept apart.

Mean, standard error, standard deviations

Scatter plots and correlations

If we have paired explanatory and response data we are often interested in seeing if a relationship exists between them. To do this, we first plot the data in a scatter plot.
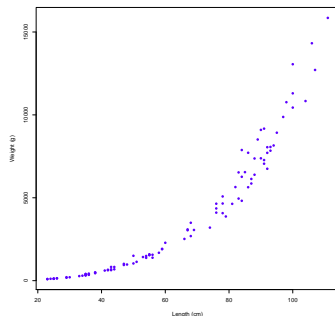

Figure : Figure: Scatter plot showing the length-weight relationship of fish species "X". Data source : Marine Resource Institution - Iceland.