Getting started with R

Exercises

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01 November 2023

Sections 1-3

1. Open RStudio and familiarize with its features, exploring windows and menus.

2. Run the following commands with arithmetic calculations in the command-line interface provided by the Console window:

   - 5 + 3/4

   - 4 to the power of 2

   - the logarithm of -8

   - the square root of 10 plus 6

   - $\frac{\sin(4)+10}{\exp 1.4+(\log 2*2)}$

3. Assign the result of the last arithmetic calculation above to an object with name `z`.

4. Print a string with your first name, and then assign it to an object `name`.

5. Scroll backwards through the command history and edit the last command, re-assigning the object `name` with your full name.

6. Add `z` and `name`: what does happen?

7. Create an object `w` equal to `z` to the power of 2.

8. Using the function `rnorm()`, create a sample of 7 observations from a normal distribution with a mean of 5 and a standard deviation of 0.1.

9. Repeat the command above, this time reversing the order of the arguments of `rnorm()`. Does it work?

Sections 4-5

10. Display the location of the working directory for this session.

11. Set the working directory to the folder RCOURSE on your laptop, using the command-line interface or the menus in RStudio.

12. List the objects stored in the global environment.

13. Run from source the script TESTSCRIPT.R included in the folder FILES, and list the objects again.

14. Save the workspace in a .RDATA file called MYFIRSTSESSION.

15. Erase all the objects from the workspace.

16. Load the workspace ANOTHERSESSION.RDATA from the folder FILES, and list the objects now present.

17. Open a new script in the Editor window and save it in the working directory, choosing a name.

18. From the History window, transfer some of the last commands to the new script and run them from there. Use this script from here on to input your commands.

19. Load the recommended package SURVIVAL into the session.

20. Install the contributed package `metafor`, and then load it into the session.

21. Display the search path.