# Self-Study Exercises

After all these self-learning exercises, it only seems natural that you should test your knowledge at least a little bit! Please complete the following self-reflective and knowledge check questions to ensure you’re ready to start the course.

1. In your experience, how is the R programming language different from other statistical software you’ve used in your work? How is it similar?
2. What is the function for installing packages in R?
3. Using this function, please install the following packages:

tidyverse

scales

padr

writexl

fs

RColorBrewer

ggrepel

ggpubr

zoo

viridis

igraph

tidygraph

ggraph

flextable

viridis

incidence

officer

officedown

1. The R package “tidyverse” is unique, in that it is actually a collection of several packages that you will use frequently throughout this course (and hopefully in your career!) In the space below, please list the different packages included in the “tidyverse”.

| “Core Packages” | “Non-core Packages” |
| --- | --- |
|  |  |

1. Did you encounter problems installing R packages? If yes, did you understand what the error message was telling you? If not, did you understand what the error message was telling you after you googled it?
2. List two different ways to look up help documentation for R packages and functions:
3. How do statistical software handle dates generally? Why is it useful for dates to be handled in this way?
4. What is R Markdown? Can you see any added value of the functionality provided by R Markdown in your day-to-day work? Why or why not?
5. What does the “gg” stand for in the package “ggplot”? Why do you think it’s called this?
6. What is the difference between long and wide format? Provide an example of when you could use each of these formats.