Day 1 - Back to base-ics: Installing and getting familiar with base R

Navigating the filesystem

getwd()	prints working directory
setwd()	changes working directory
source()	runs ___.R file
choose.dir()	GUI for selecting folder
choose.file()	GUI for selecting file
../	go to parent directory

Math operators

+	addition
-	subtraction
*	multiplication
/	division
^	exponent
%%	modulo
%/%	integer division

Basic math functions

abs()	absolute value
round()	round to integer
sqrt()	square root
factorial()	factorial
choose(n, m)	n choose m
log()	natural logarithm
log(___, base = ___)	logarithm of a given base
log10()	base-10 logarithm

Variables

x = 10	initialize x to 10
y <- 9	…also initializes variable
print(x)	prints value of x
x	…also prints value of x
(z <- 8)	initializes z to 8 and prints value
x <- 7	changes value of x to 7
y <- x + z	changes value of y to sum of x & z
z <- 6	changing z doesn’t change y

Classes

NULL	null value, a.k.a. empty
20 or 20.1	numeric, a.k.a. float
as.numeric(1) or 1L	integer
TRUE or FALSE	logical, a.k.a. boolean
“a” or “apple”	character, a.k.a. string
class()	returns the class of an object
as.___()	coerces an object to different class

Functions

```
function_name <- function(argument) {
        x <- argument * 2
        return(x)
}

function_name(3)
> 6
```

Multiple arguments

```
multiply <- function(a, b) {
        return(a * b)
}

multiply(3, 4)
> 12
```

Lexical Scoping

```
z <- 4
my_other_function <- function(f) {
        z <- f ^ 3
        return(z)
}

my_other_other_function(2)
> 8

z
> 4
```