

Exercises: Introduction to R and RStudio

Resource: <http://swcarpentry.github.io/r-novice-gapminder/01-rstudio-intro/>

Challenge 1

Which of the following are valid R variable names?

```
min_height
max.height
_age
.mass
MaxLength
min-length
2widths
celsius2kelvin
```

Solution to challenge 1

The following can be used as R variables:

```
min_height
max.height
MaxLength
celsius2kelvin
```

The following creates a hidden variable:

```
.mass
```

The following will not be able to be used to create a variable

```
_age
min-length
2widths
```

Challenge 2

What will be the value of each variable after each statement in the following program?

```
mass <- 47.5
age <- 122
mass <- mass * 2.3
age <- age - 20
```

Solution to challenge 2

```
mass <- 47.5
```

This will give a value of 47.5 for the variable mass

```
age <- 122
```

This will give a value of 122 for the variable age

```
mass <- mass * 2.3
```

This will multiply the existing value of 47.5 by 2.3 to give a new value of 109.25 to the variable mass.

```
age <- age - 20
```

This will subtract 20 from the existing value of 122 to give a new value of 102 to the variable age.

Challenge 3

Run the code from the previous challenge, and write a command to compare mass to age. Is mass larger than age?

Solution to challenge 3

One way of answering this question in R is to use the `>` to set up the following:

```
mass > age
```

```
[1] TRUE
```

This should yield a boolean value of TRUE since 109.25 is greater than 102.

Challenge 4

Clean up your working environment by deleting the mass and age variables.

Solution to challenge 4

We can use the `rm` command to accomplish this task

```
rm(age, mass)
```