

Welcome to rstudio

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Welcome to rstudio!

Let's start off by clicking the "Visual" button above, so this document is a little easier to read and work with. You'll likely get a popup window the first time, confirming that you want to switch to Visual Mode.

Just click *Use Visual Mode*, with *Don't show this message again* checked.

Learning objectives

- Gain some familiarity with rstudio
- Learn how to run R code in "code chunks"
- Perform some arithmetic with R
- Create variables in R, and assign values to them

rstudio windows

You'll notice rstudio is divided into 4 windows. Let's take a look at each one:

- upper-left: this is the area for reading / writing files. We'll probably use this window the most this semester.
- lower-left: this is the console, where you can run R code directly. You might use this occasionally, but for the most part probably won't have to.
- upper-right: this window has a couple useful tabs:
 - Environment: any variables you create will be listed here. This can be useful for quick reference.
 - History: this shows the R commands you've run within a session.
- lower-right: this window lists any files and folders that are part of your project/assignment. It also has tabs that can display plots and help documentation.

You can resize windows / borders as needed in order to more easily focus on the particular window you're using.

Code chunks

The grey rectangles below are "code chunks", where you can type and execute R code. To run the code, click the green triangle in the upper-right corner of the code chunk.

Let's try running the code chunk below, which is just some simple arithmetic:

```
2+2
```

```
[1] 4
```

Now it's your turn. In the code chunk below, enter a command to subtract 7 from 18, and run it:

```
# Enter code below (by the way, I'm a comment)
```

```
18-7
```

```
[1] 11
```

Variables

Programming languages, including R, rely heavily on the use of *variables*. A variable is something you define and assign a value to. In the code chunk below, we're creating a variable called `x`, and assigning the value of 7 to it:

```
# Notice we use a 'left pointing arrow' to assign the value
```

```
x<-7
```

We don't get any real feedback from running the code above, but it's often a good idea to check your work by printing a variable's value to the screen. To do this, you can run code that simply lists the variable:

```
# prints to the screen:
```

```
x
```

```
[1] 7
```

It's worth noting that you can run multiple lines of code within a code chunk:

```
# create a variable "penguinCount" and give it the value 3
```

```
penguinCount<-3
```

```
# print to screen
```

```
penguinCount
```

```
[1] 3
```

Now it's your turn. Work with your group / people next to you, and do the following:

- create a variable called `y`, assign three plus eight to it, and print to the screen.
- create a variable `z`, and assign `x+y` to it, and print to the screen

```
# create the variable "y" here, and print to screen  
y<-3+8  
  
y
```

[1] 11

```
# create the variable "z" here, and print to screen  
  
z<-x+y  
z
```

[1] 18

You made it! That's it for now. We'll do a quick review of variables during the next lesson, and will work our way toward some more exciting topics.

Next up: `code-a-long-1.2.qmd`.