

# CSCI 36 - Fall 2024 - Activity - August 26

Prof. Sarah Cannon

8/26/2024

## 1. Installing R and RStudio.

The main programming environment we'll be using this semester is RStudio. It is already installed on all CMC lab and classroom computers. You will need a CMC account to access these computers; off-campus students who would like a CMC account should email Prof. Cannon.

You can also install R and RStudio on your own personal computer, if you'd like. There are two steps to this installation, and it's important to do them in this order:

- Install R: <https://cloud.r-project.org/>, choose the appropriate version for your computer's operating system
- Install RStudio: <https://www.rstudio.com/products/rstudio/download/>, choose the free RStudio Desktop version

Even if you have R installed already, please follow these steps anyway so that you have the most up-to-date version of R.

If you have any problems with this installation process, Prof. Cannon's office hours during the first week of the semester are Wednesday 2-3pm. Or, email Prof. Cannon to set up a meeting at a different time.

## 2. Here are the example commands we used in class. Try these - and other similar commands - in the RStudio Console. What other arithmetic operations can you do?

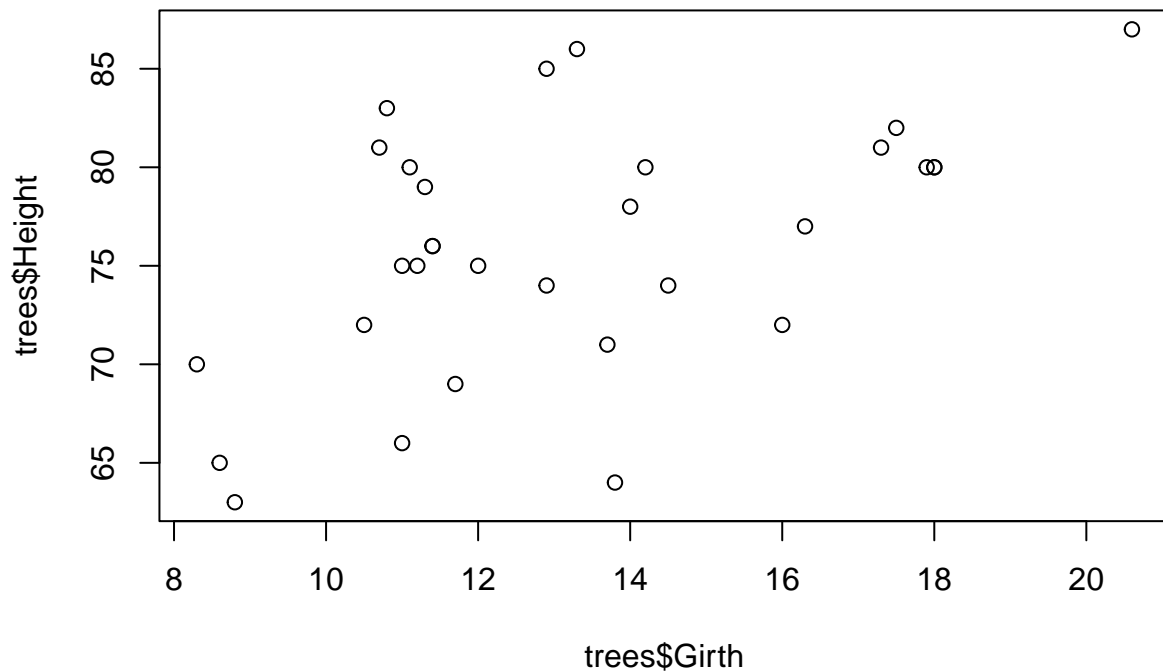
```
2+3
x <- 2
y <- 3
x
y
x + y
x - y
```

## 3. Open a new RMarkdown file. Delete all text except the first 6 lines, make a new code chunk, and run some commands similar to the previous question

## 4. Download the file "8-26 Activity.rmd" from Canvas and open it in RStudio. Knit this file and take a look at what's produced. For the rest of the activity, you can work directly in this file (in code chunks) if you'd like.

## 5. Here's the code we used for the trees data set.

```
trees
?trees
plot(trees$Girth, trees$Height)
```



What other variable is in the trees data set? Plot the relationship between this new variable and Girth, and this new variable and Height. What do you observe?

6. There are many other built-in data sets in R. You can access them by typing:

```
data()
```

Pick a different data set from this list. Figure out what's in it, make some plots with this data, and describe what you've observed. Share your findings with others around you.