Example Report in RMarkDown

STA302/1001 Autumn 2017

First Heading: Simple example of a sentence

The sum of 4 and 5 is calculated by the R commands in this document to be 9.

Second example

Here is some more R code embedded in the document!

```
x <- c(2.1,-1,0,4) # c = combine
y <- rt(4,6) # Four observations from a t_6 distribution
stdDev <- sd(x)
mean(y)
```

```
## [1] -0.4534781
```

So, using more R commands, the average of the t-distributed sample turns out to be $\sim$ -0.45, and we have $\text{var}(x) \approx 4.969$.

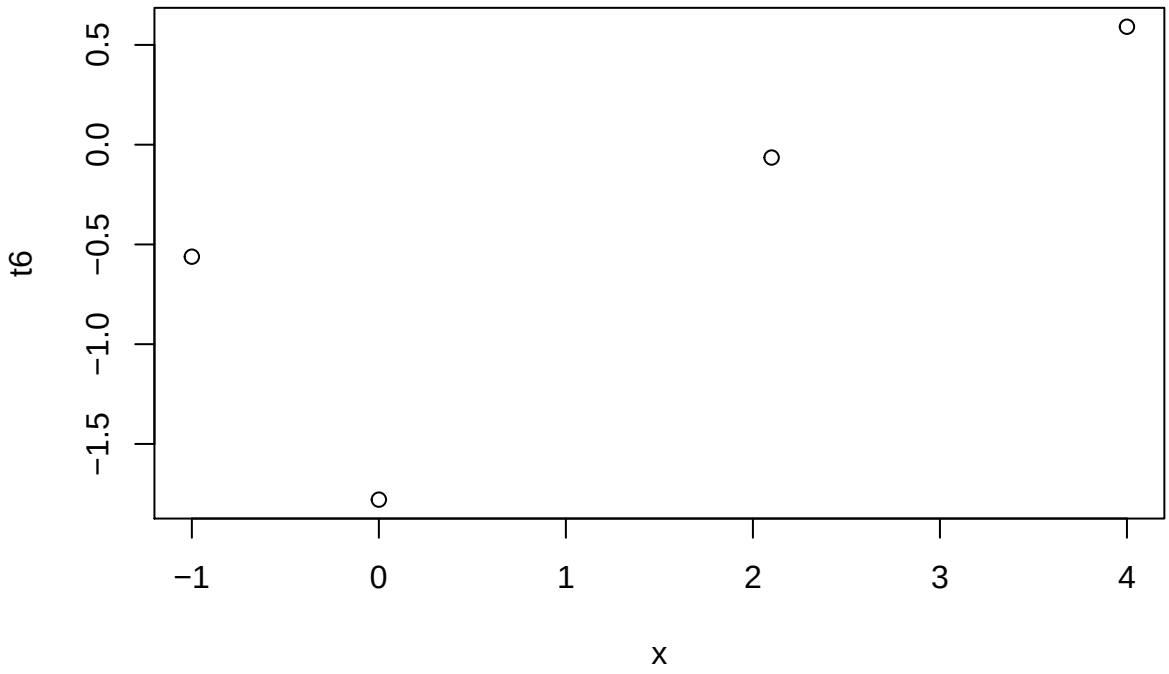
Data can be stored in a "data frame", which is sort of like a matrix with rows and/or columns labelled:

```
z <- data.frame(x,y)
print(z)
```

```
##      x           y
## 1  2.1 -0.06441115
## 2 -1.0 -0.56145121
## 3  0.0 -1.77916235
## 4  4.0  0.59111220
```

Third example: Visualization

```
plot(x,y,ylab="t6")
```



Fourth example: Using packages

```
install.packages("dplyr", repos='http://cran.rstudio.com')
```

```
library(dplyr) # load up the package that was just installed
filter(z,x>0) # a concise command, courtesy of dplyr
```

```
##     x           y
## 1 2.1 -0.06441115
## 2 4.0  0.59111220
```