Lab_0_Getting_Started_R_and_Rmd

Meiheng_Liang

2024-09-06

```
#some arithmetic expressions
8 + 3
log(2)
((121/3) * (6^3))/(pi)
```

```
#create x and y
x = 8 + 3
y = log(2)
#calculation
x + y
#define and return z
z = x * y
z
```

```
#a semicolon (;) can be used to separate commands
x = 8 + 3; x
x = 21; x
```

```
#define and return vectors a and b
a = c(4.1, 6.7, 8.2, 1.8); a
b = 2*a; b
```

```
#calculate mean and standard deviation
mean(a)
sd(a)
```

```
#plot a against b
plot(a, b)
```

```
install.packages('tinytex')
tinytex::install_tinytex()
install.packages('C:/Users/Chris/git-test/B518/oibiostat_0.2.0.tar.gz')
```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

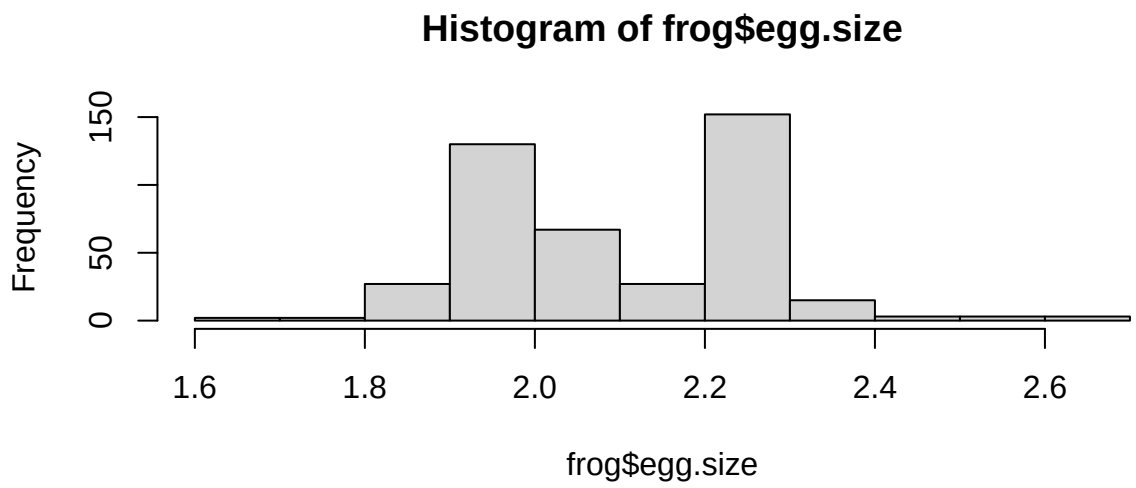
```r
library(oibiostat)   #loads the package
data(frog)           #loads the frog dataset
mean(frog$egg.size)
```

```
## [1] 2.114216
```

Including Plots

You can also embed plots, for example:

```r
hist(frog$egg.size)
```




```r
median(frog$egg.size)
```

```
## [1] 2.089296
```

```r
sample.data = matrix(1:9, nrow = 3, byrow = T)  #create sample dataset
save(sample.data, file = "sample_data.Rdata")   #save the file
rm(list = ls()) #clears the environment, equivalent to clicking the broom icon
```

```r
load("sample_data.Rdata")
```

```r
#produce a side-by-side boxplot
boxplot(sample.data)
```

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.