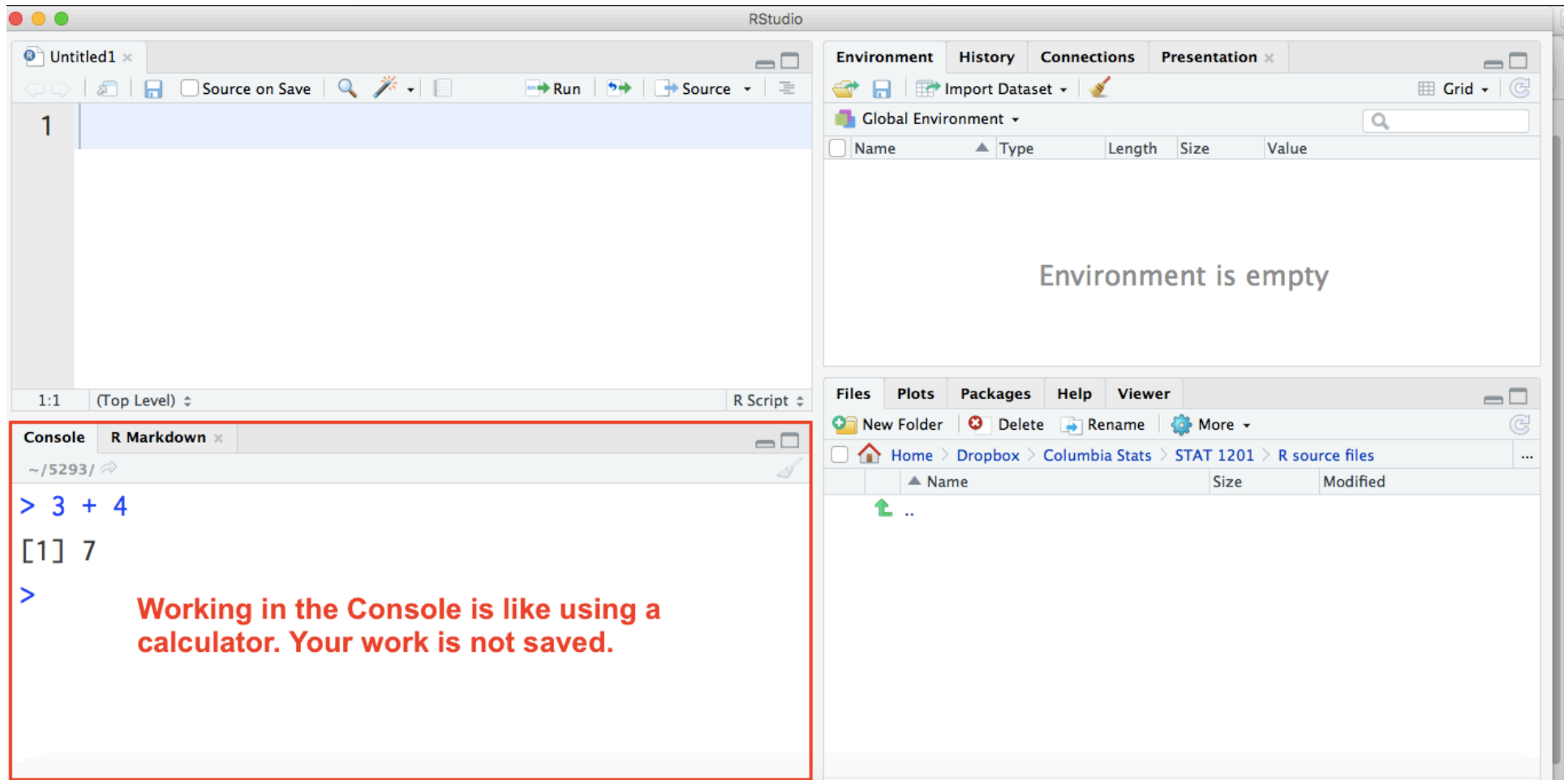
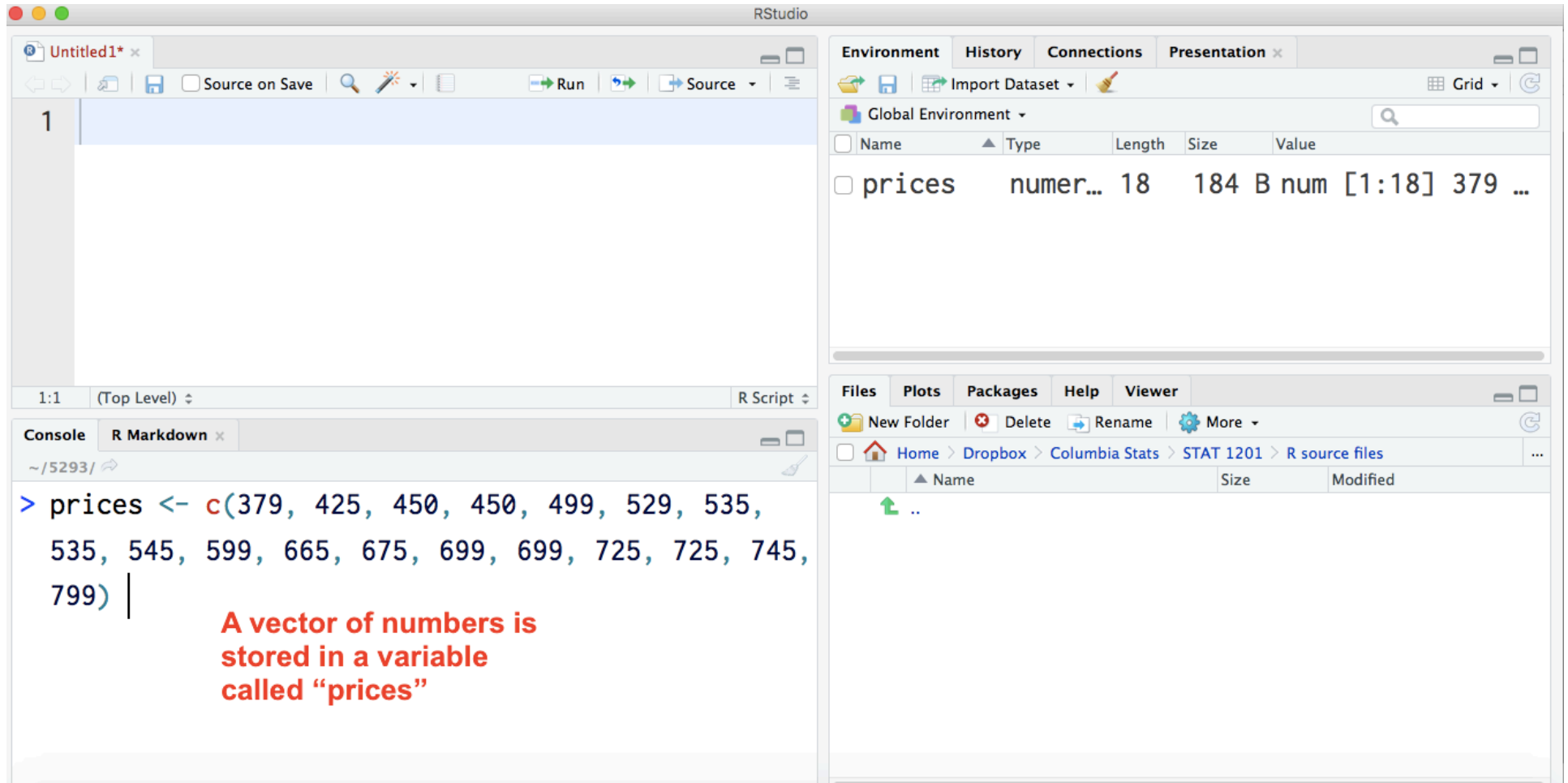


RStudio



Working in the Console



The screenshot displays the RStudio application window. The top-left pane shows a script editor with a single line of R code: `prices <- c(379, 425, 450, 450, 499, 529, 535, 535, 545, 599, 665, 675, 699, 699, 725, 725, 745, 799)`. The bottom-left pane is the Console, showing the execution of this code. The right-hand side of the window contains two panes. The top pane is the Environment pane, which lists the variable `prices` as a numeric vector of length 18. The bottom pane is the Files pane, showing the current directory structure.

Environment

Name	Type	Length	Size	Value
prices	numer...	18	184 B	num [1:18] 379 ...

Files

Name	Size	Modified
..		

Console

```
> prices <- c(379, 425, 450, 450, 499, 529, 535,
535, 545, 599, 665, 675, 699, 699, 725, 725, 745,
799)
```

A vector of numbers is stored in a variable called "prices"

Creating a stem-and-leaf plot

The screenshot shows the RStudio interface. The source editor on the left contains the following R code:

```
1  
1:1 (Top Level) R Script  
> stem(prices)
```

The console on the bottom left displays the output of the `stem(prices)` function:

```
The decimal point is 2 digit(s) to the right of  
the |  
3 | 8  
4 | 355  
5 | 03445  
6 | 078  
7 | 00335  
8 | 0
```

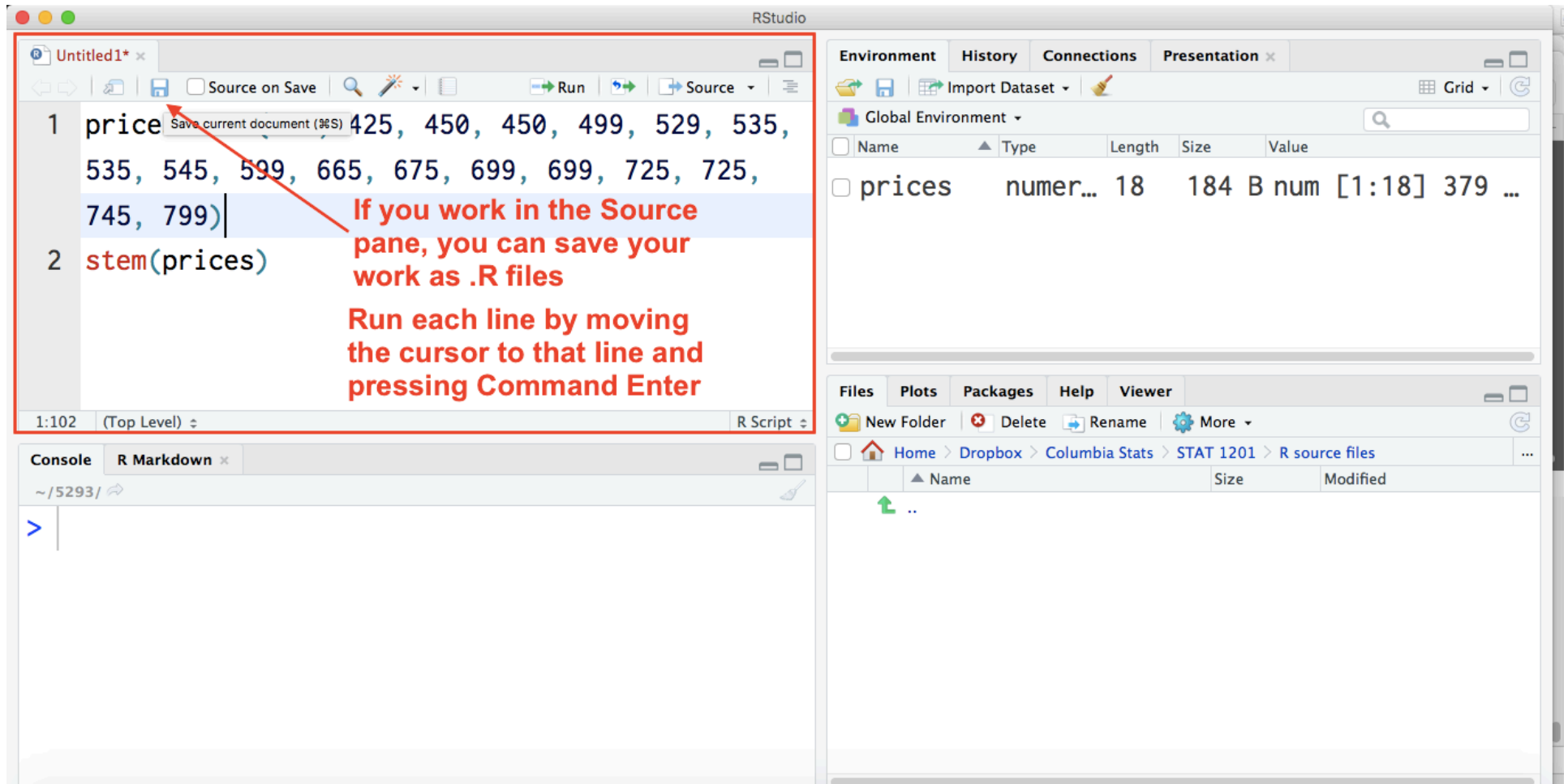
A red text annotation is overlaid on the console output, stating: **stem() is a function. By “passing” the prices variable to the function, we get a stem and leaf plot of our data**

The Environment pane on the right shows the Global Environment with the following table:

Name	Type	Length	Size	Value
prices	numer...	18	184 B	num [1:18] 379 ...

The Files pane at the bottom right shows the current directory structure: Home > Dropbox > Columbia Stats > STAT 1201 > R source files.

Saving your work as an R script



The screenshot shows the RStudio interface with the following components:

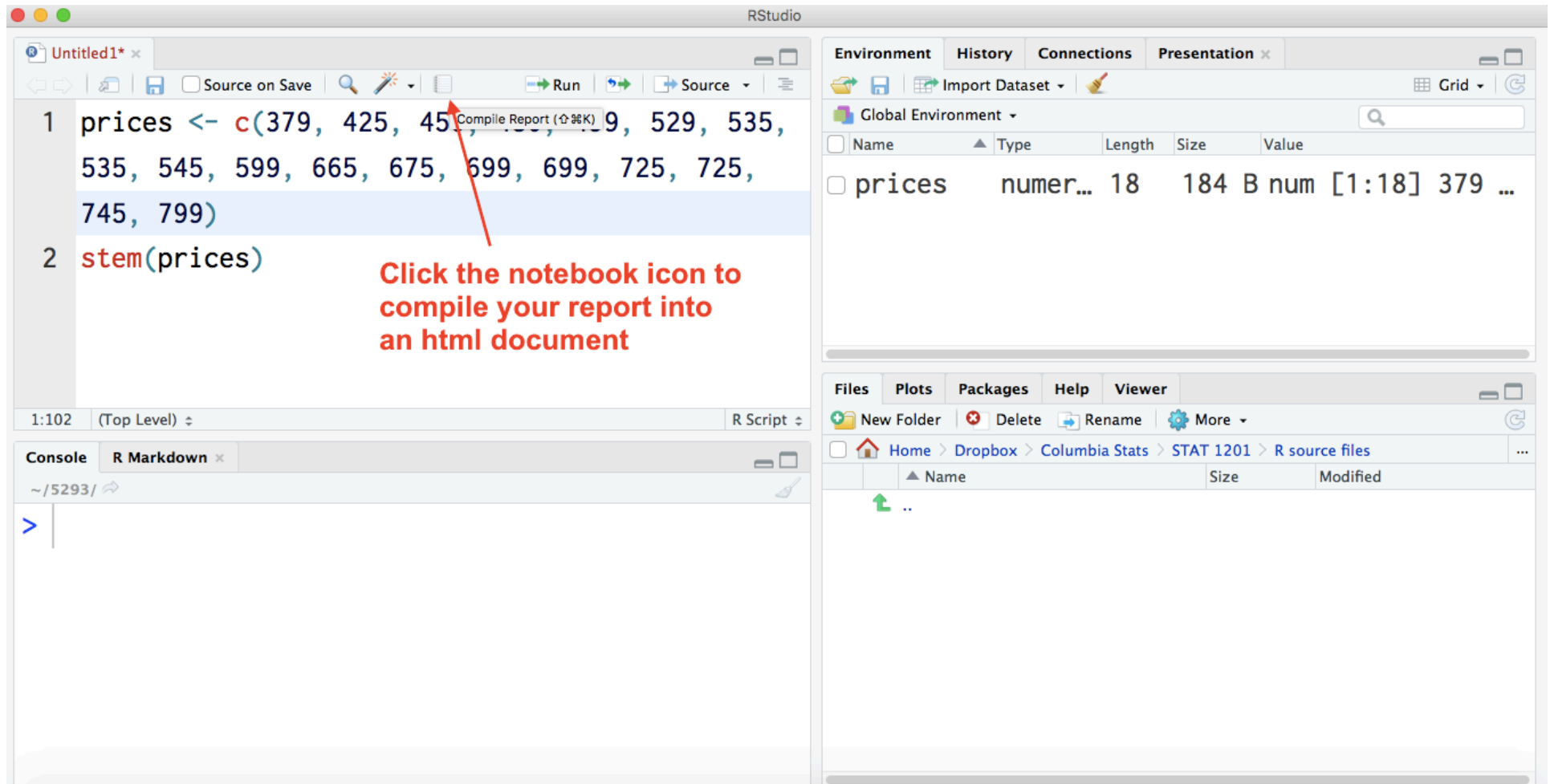
- Source Pane:** Contains two lines of R code:

```
1 price <- c(425, 450, 450, 499, 529, 535, 535, 545, 599, 665, 675, 699, 699, 725, 725, 745, 799)
2 stem(prices)
```

A red box highlights the 'Save current document (⌘S)' button and the text: **If you work in the Source pane, you can save your work as .R files**
Run each line by moving the cursor to that line and pressing Command Enter
- Environment Pane:** Shows the 'Global Environment' with a table of variables:

Name	Type	Length	Size	Value
prices	numer...	18	184 B	num [1:18] 379 ...
- Files Pane:** Shows the file explorer with the path: Home > Dropbox > Columbia Stats > STAT 1201 > R source files. It lists a file named '..' with a green arrow icon.
- Console:** Shows the prompt '>' and the path '~/5293/'.

Compiling your work into an .html file



RStudio

stem.R x

Source on Save Run Source

```
1 prices <- c(379, 425, 450, 450, 499, 529, 535,
2 535, 545, 599, 665, 675, 699, 699, 725, 725,
3 745, 799)
4 stem(prices)
```

1:102 (Top Level)

Console R Markdown

~/5293/

Environment History Connections Presentation

Import Dataset

Global Environment

Name	Type	Length	Size	Value
prices	numer...	18	184 B	num [1:18] 379 ...

Help Viewer

Rename More

Columbia Stats > STAT 1201 > R source files

Size	Modified
115 B	Jan 18, 2018, 11:15 AM

Compile Report from R Script

Create a standalone report that contains the code and output from your R script.

For more information on compiling reports, see the documentation at [Compiling Reports from R Scripts](#)

Report output format:

HTML

Compile Cancel

Choose HTML (the default) and click "Compile"

stem.R

```
1 prices <- c(379
535, 545, 599,
745, 799)
2 stem(prices)
3
```

1:102 (Top Level)

Console R Markdown

>

stem.html

Open in Browser

Find

Publish

stem.R

JoyceRobbins

Thu Jan 18 11:15:32 2018

prices <- c(379, 425, 450, 450, 499, 529, 535, 535, 545, 599, 665, 675, 699, 699, 725, 725, 745, 799)
stem(prices)

The decimal point is 2 digit(s) to the right of the |

3 | 8
4 | 355
5 | 03445
6 | 078
7 | 00335
8 | 0

Your compiled document,
which shows code as well
as output

RStudio

stem.R x

Source on Save Run Source

```
1 prices <- c(379, 425, 450, 450, 499, 529, 535,
2 535, 545, 599, 665, 675, 699, 699, 725, 725,
3 745, 799)
4 stem(prices)
```

1:102 (Top Level) R Script

Console R Markdown

~/5293/

>

Environment History Connections Presentation x

Import Dataset Grid

Global Environment

Name	Type	Length	Size	Value
prices	numer...	18	184 B	num [1:18] 379 ...

Files Plots Packages Help Viewer

New Folder Delete Rename More

Home > Dropbox > Columbia Stats > STAT 1201 > R source files

Name	Size	Modified
..		
stem.R	115 B	Jan 18, 2018, 11:15 AM
stem.html	718.9 KB	Jan 18, 2018, 11:15 AM

An html file is automatically saved when you click Compile


1201/StemandLeafPlot.md at m · x

Joyce




← → ↻ 🏠


GitHub, Inc. [US] | https://github.com/jtr13/1201/blob/master/R/StemandLeafPlot.md




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 jtr13 Stem and leaf plots

214426b on Sep 17, 2017

1 contributor

19 lines (15 sloc) | 340 Bytes

Raw Blame History   


Stem and leaf plot

```
prices <- c(379, 425, 450, 450, 499, 529, 535, 535, 545, 599, 665,
           675, 699, 699, 725, 725, 745, 799)

stem(prices)

##
## The decimal point is 2 digit(s) to the right of the |
##
## 3 | 8
## 4 | 355
## 5 | 03445
## 6 | 078
## 7 | 00335
## 8 | 0
```

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1201/FrequencyHistogram.md

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jtr13 Frequency histograms 887251b on Sep 17, 2017

1 contributor

18 lines (12 sloc) | 482 Bytes Raw Blame History

Frequency histograms

```
prices <- c(379, 425, 450, 450, 499, 529, 535, 535, 545, 599, 665,
           675, 699, 699, 725, 725, 745, 799)

hist(prices)
```

Histogram of prices

Price Range	Frequency
379 - 425	1
425 - 450	3
450 - 499	1
499 - 529	4
529 - 535	1
535 - 545	4
545 - 599	3
599 - 665	1

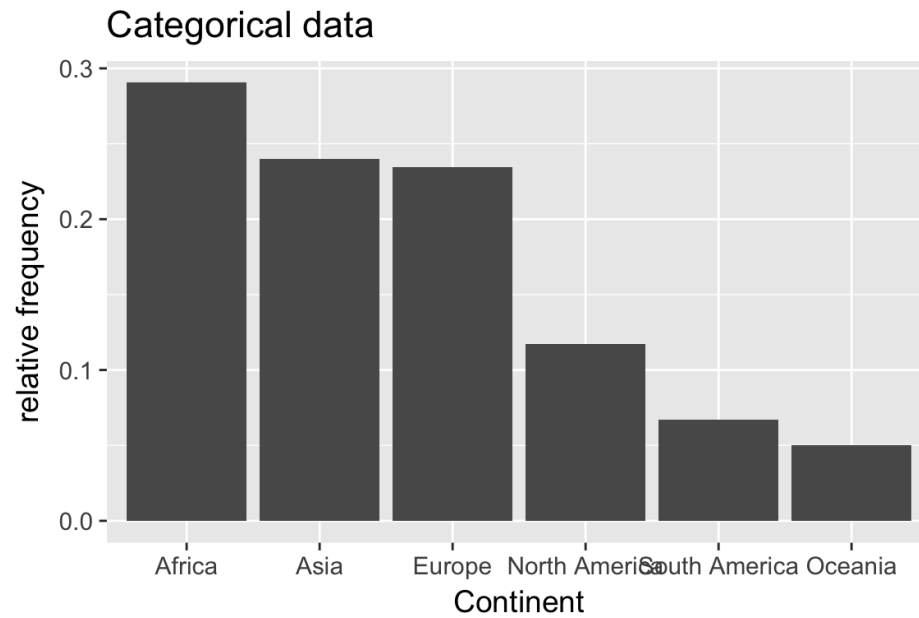
```
hist(prices, breaks = c(300, 400, 500, 600, 700, 800),
     col = "lightblue")
```

Histogram of prices

Price Range	Frequency
300 - 400	1
400 - 500	3
500 - 600	4
600 - 700	3
700 - 800	1
800 - 900	1

https://github.com/jtr13/1201/blob/master/R/FrequencyHistogram_files/figure-markdown_github/unnamed-chunk-1-1.png

Relative frequency bar chart



Drawing histograms

Asking prices for one-bedroom apartments in Morningside Heights, in thousands

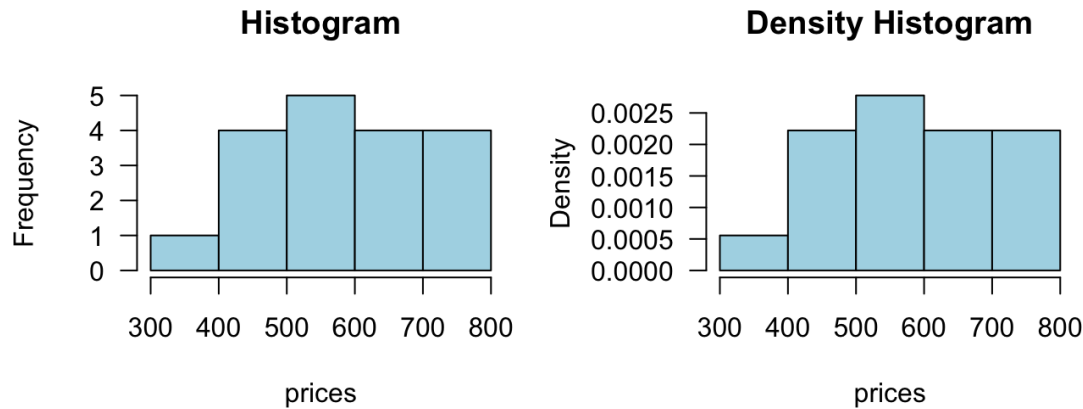
Data source: cityrealty.com, 9/13/2016

379, 425, 450, 450, 499, 529, 535, 535, 545,
599, 665, 675, 699, 699, 725, 725, 745, 799

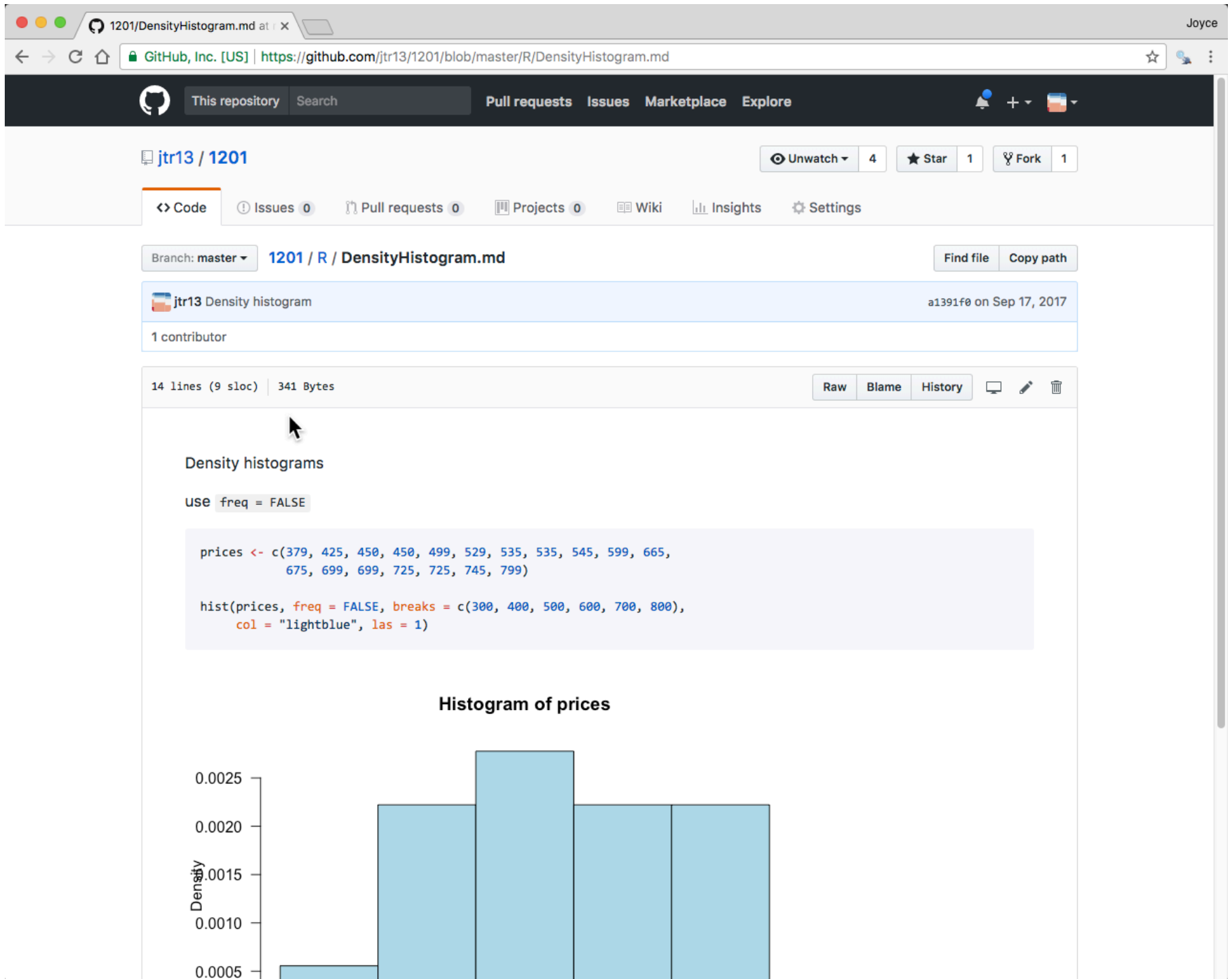
**Histogram of Morningside Heights
One-Bedroom Apt. Prices**



Density histogram



Class	Frequency	Rel. Frequency	Density
(300, 400]	1	.056	.00056
(400, 500]	4	.222	.00222
(500, 600]	5	.278	.00278
(600, 700]	4	.222	.00222
(700, 800]	4	.222	.00222



Five number summary

1. min
2. lower fourth
3. median
4. upper fourth
5. max

```
summary(prices)
```

##	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
##	379	506	572	593	699	799

1201/Boxplot.md at master · jtr

Joyce

← → ↻ 🏠

GitHub, Inc. [US] | https://github.com/jtr13/1201/blob/master/R/Boxplot.md

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Branch: master ▾ 1201 / R / Boxplot.md

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📄 jtr13 boxplots 7f25657 on Sep 16, 2017

1 contributor

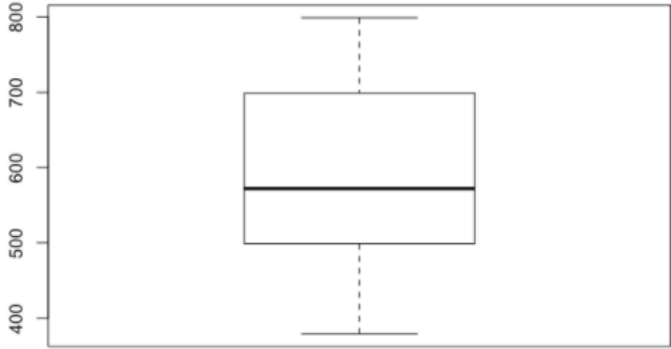
29 lines (18 sloc) | 599 Bytes

Raw Blame History 🖨 ✎ 🗑

```
# box plots

prices <- c(379, 425, 450, 450, 499, 529, 535, 535, 545,
           599, 665, 675, 699, 699, 725, 725, 745, 799)

boxplot(prices)
```



```
boxplot(prices, horizontal = TRUE)
```