

Using the **R** Code and Git Example Environments with **knitr**

Alan's Modifications and Notes

February 17, 2014

1 Introduction

This is a test of the **R Code** and **Git Example** environments. By the way, this document was last compiled Monday, February 17, 2014 - 12:08:20.

1.1 Simple Arithmetic

R Code 1.1

```
1 + 1  
[1] 2
```

1.2 Generate Random Data

R Code 1.2

```
x <- rnorm(1000)
```

Find the standard deviation of **x**.

R Code 1.3

```
sd(x) # standard deviation  
[1] 0.9728
```

How about **R Code** [1.2](#) and [1.3](#)? The standard deviation of **x** is 0.9728.

1.3 Graphs and Environments

R Code 1.4

```
junk <- rnorm(10000)
MEAN <- mean(junk)
MEAN
[1] 0.01513
```

The mean of the junk is 0.0151. Note: It seems that an error is thrown if a code chunk with a graph and `rnorm` is executed at the same time. Work around is as shown below. That is, hide the figure when showing the code...then show the figure with a separate code chunk. Note that Figure 1 is hyperlinked!

R Code 1.5

```
library(ggplot2)
ggplot(data = mtcars) +
  geom_density(aes(x = mpg), fill = "pink") +
  theme_bw() +
  labs(x = "miles per gallon", y = "", title = "$\\alpha + \\beta = \\delta$")
```

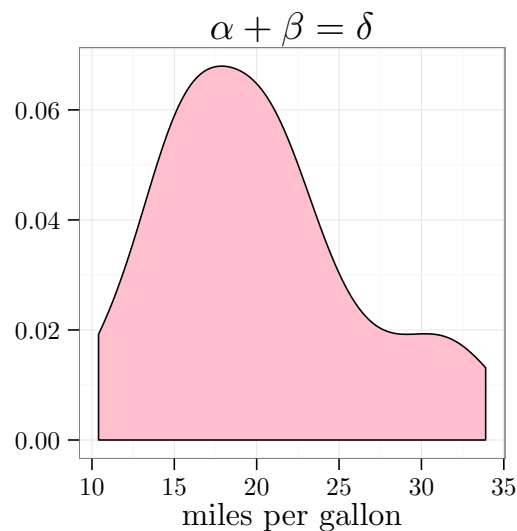


Figure 1: This is where you explain your graph

When working with OSX, one may want to change `engine = 'sh'` to `engine = 'bash'`.

Git Example 1.1

```
git config --list

user.name=Alan Arnholt
user.email=arnholtat@appstate.edu
credential.helper=osxkeychain
color.ui=true
core.repositoryformatversion=0
core.filemode=true
core.bare=false
core.logallrefupdates=true
core.ignorecase=true
core.precomposeunicode=false
remote.origin.url=https://github.com/alanarnholt/STT4870.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.master.remote=origin
branch.master.merge=refs/heads/master
```

Look at **R Code 1.1 on page 1** to add 1+1 and get the answer 2. The output from **Git Example 1.1** shows how my machine is configured. **Git Example 1.2** shows the log.

Git Example 1.2

```
git log --pretty=oneline -3

dfc8679773fbf6e3ec493dde9cc72e4e9acbc67a minor changes
a723332bfe0574aaa6cc71a3391a9d1a5110be08 initial commit
716228d8dfeb1d139c29badd85184971d90471cd add chapter 7 modifications
```