Intro to R-Markdown

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R Markdown Intro

We can use R-markdown to typeset our work and solutions. Since we will be doing a lot of work on R, where you will need to show your code and solutions, this might be a better option since it will directly allow you to integrate your code and responses into one neat document.

You need to know the Syntax of R-markdown, which is not too difficult to learn. You can very easily integrate some Latex functions into a markdown document (For Latex purists a better option might be to use Knitr which also allows you to integrate your code and writing together.)

Some basics function:

1) # This is used to indicate a new section
2) ## This is used to indicate a new subsection
3) ### This is used to indicate a new subsubsection
4) Comment out text by hilighting them and clicking cmd+shft+c on MAC and cntrl+shft+c on Window
5) Italics, by putting * on both sides of the word, example *this is an italic*
6) Bold, by putting * on both sides, example **this is a bold font**
7) Bold and Italic, by putting three * on both sides, example ***bold and italic***

Latex Functions:

You can bring in a whole host of Latex functions. Primarily for us the functions related to writing equations will be the most useful.

i) An *in line* equation can be written by in the following manner $ equation $, example of an in line equation $y = mx + c$.
ii) An equation on a separate line may be written as, $$ equation $$, example,

$$y = mx + c$$

.
iii) We can also use some of the Latex fonts, such as backslash+mathbb or backslash+mathcal, example, $\mathbb{R}$, $\mathcal{L}$.

This is a new section

This is a new subsection

This is a new subsubsection

Thus hashtags are used to indicate sections, if you want to use a hashtag in the document NOT signify a new section you will need to do a backslash+hastag, like this #.

R Code Integration:

Your `R` code can be integrated into R-markdown using what is called chunks. Chunks will always have the following format,

```
print("This chunk will only show the results and the code")
```

```
## [1] "This chunk will only show the results and the code"
```

```
a = 1
b = 2
c = c(1,2,3,4,5,6,7,8,9)

a+b
```

```
## [1] 3
```

```
c^2
```

```
## [1]  1  4  9 16 25 36 49 64 81
```

Here is a hidden chunk,

```
## [1] "This chunk will only show the results and not the code"
```

```
## [1] 3
```

```
## [1]  1  4  9 16 25 36 49 64 81
```

Here is another chunk, where we used some data from Tutorial 1.

```
data = read.csv("/Users/zaydomar/Dropbox/Zayd/Class_Notes/MATH 204 Principles of Statistics/Tutorials/Tu

plot(data$Ext,data$Force, xlab = "Extension", ylab = "Force", main = "Extension vs Force" )
```