Markdown Notes

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

To turn a markdown document into a pdf, run:

```
library(knitr)
library(rmarkdown)
render("filename.rmd", "pdf_document")
```

For more options see:

```
?render
```

Sections

A section header is proceeded by a number of `#`'s, where the `#` of hashes represents the level. For example:

Sub-Section

Sub-Sub-Section

Lists

Enumerated lists are simply lines preceded by `1.`. For example,

1. First item
2. Second item.
3. Numbers don't matter.
    1. Sub-list
    2. Again, numbers don't matter.
4. Back to original ordering.
5. Start of a new list.

For unordered lists, simply preface with `*` or `-` or `+`:

- first
- second
- third
    - Sub list
    - another
- fourth

Tables

Tables are generated using ASCII.

Name	Height	Weight
Bob	6'1"	195

Name	Height	Weight
Sue	5'4"	134

Note:

- The second line (with the :'s and -'s) separates the header from the body. The :'s refer to alignment (--- is left-aligned, --: is right- and :-: is centered). There must be at least three characters between the |'s, though more -'s is fine.

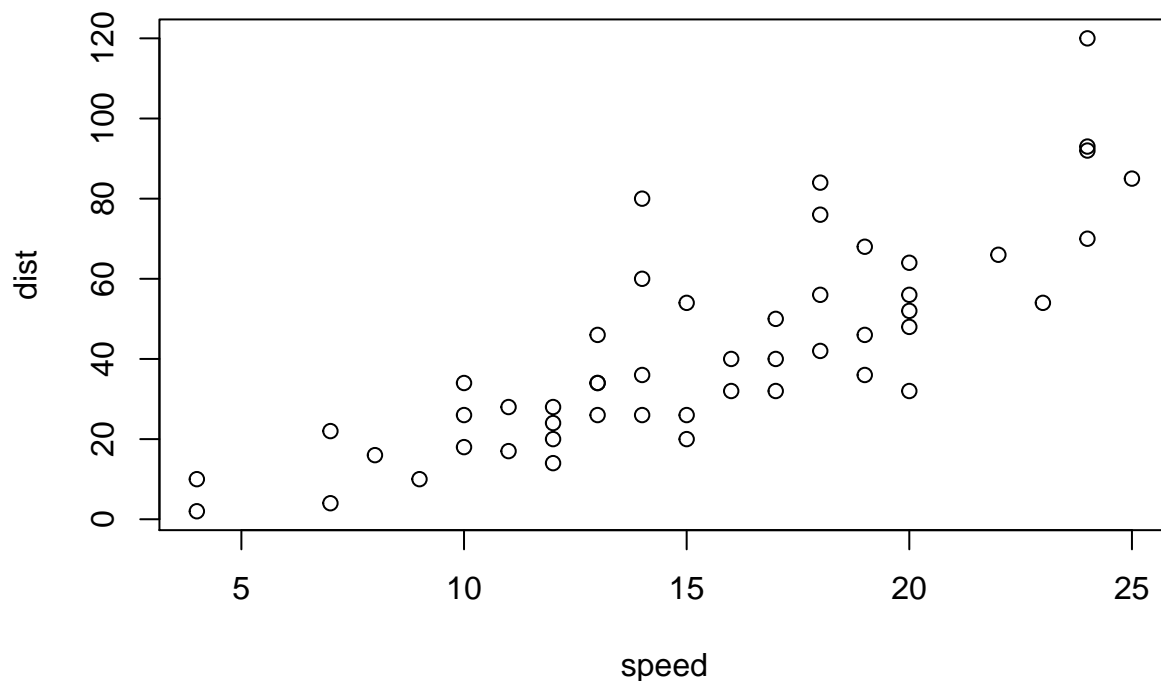- White space is ignored and only included to make editing easy.

R Markdown

RMarkdown extends Markdown to easily embed R code by creating a chunk wrapped in triple backticks. To also run the code include {r} :

```r
summary(cars)
```

```
##      speed           dist
##  Min.   : 4.0   Min.   :  2.00
##  1st Qu.:12.0   1st Qu.: 26.00
##  Median :15.0   Median : 36.00
##  Mean   :15.4   Mean   : 42.98
##  3rd Qu.:19.0   3rd Qu.: 56.00
##  Max.   :25.0   Max.   :120.00
```

You can also embed plots, for example:

You can pass options to chunks. For example, `{r, eval = FALSE}` will display R code but not execute it. Here are some useful options:

- `echo = FALSE`: Display the output but suppress the code.
- `results = 'asis'`: Prevents further processing of the output. Useful if a table created in R (e.g. using kable or xtable). Not generally needed otherwise
- `engine ='enginename'`: You can actually run other code. For example, `engine = 'stata'` runs the code through Stata, `engine = 'bash'` runs linux command line code.
- `message = FALSE` and `warning = FALSE`: Suppresses R messages and warnings respectively. Useful when loading packages.

In-line R code can be included by wrapping a call to r max(x) in single backticks. Excluding the r part renders the code as code without processing it: `max(x)`

Equations

Markdown and RMarkdown support LaTeX math equations. Inline e.g. `\(y = \beta x + \epsilon\)` : $y = \beta x + \epsilon$ Stand alone equations similarly:

```
\[
  y = \beta x + \epsilon
\]
```

$$y = \beta x + \epsilon$$