# introduction

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#### 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:

#### summary(cars)

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

### **Including Plots**

You can also embed plots, for example:



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

## Our own chunk

```
We will calculate \sqrt{2} - e^{-2}:
sqrt(2) - exp(-2)
## [1] 1.278878
library(magic)
Loading required package: abind
magic(6)
    [,1] [,2] [,3] [,4] [,5] [,6]
[1,]
    7 6 35 34 15
                          14
[2,]
     8
         5 33
                  36
                      16
                           13
[3,] 27
         26 19 18 11 10
[4,] 25
         28 20 17 9 12
[5,] 23
          22 3 2 31 30
          24 1 4
[6,]
     21
                      29 32
library(car)
## Loading required package: carData
head(cars,3)
    speed dist
## 1
      4 2
## 2
       4
         10
## 3
    7 4
```