My first markdown file

your name here

01/15/2019

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 choose "knit to HTML", "knit to PDF", or "knit to Word"

1. Earthquake Data

<!> is used to comment out things, you will see using larger number of # key, the letter size will become smaller

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2. Embed R code, use "‘ to start and close the R environment, {r eq} is the title of the R chunk, please use different name for each chunk

```
eq<-c(18,14,10,15,8,15,6,11,8,7,12,11,23,16,15,25,22,20,16,23)
eq
```

```
##  [1] 18 14 10 15  8 15  6 11  8  7 12 11 23 16 15 25 22 20 16 23
```

```
##note that # inside the r code is to comment out things, not to make letters bigger
#### mean
mean(eq)
```

```
## [1] 14.75
```

```
#### variance
var(eq)
```

```
## [1] 32.72368
```

3. Pressure data, try Plots now

Pressure is a dataset installed in R,

```
nrow(pressure) #number of observation of the data
```

```
## [1] 19
```

```
head(pressure) #first 5 data lines
```

```
##   temperature pressure
## 1           0   0.0002
## 2          20   0.0012
## 3          40   0.0060
## 4          60   0.0300
## 5          80   0.0900
## 6         100   0.2700
```

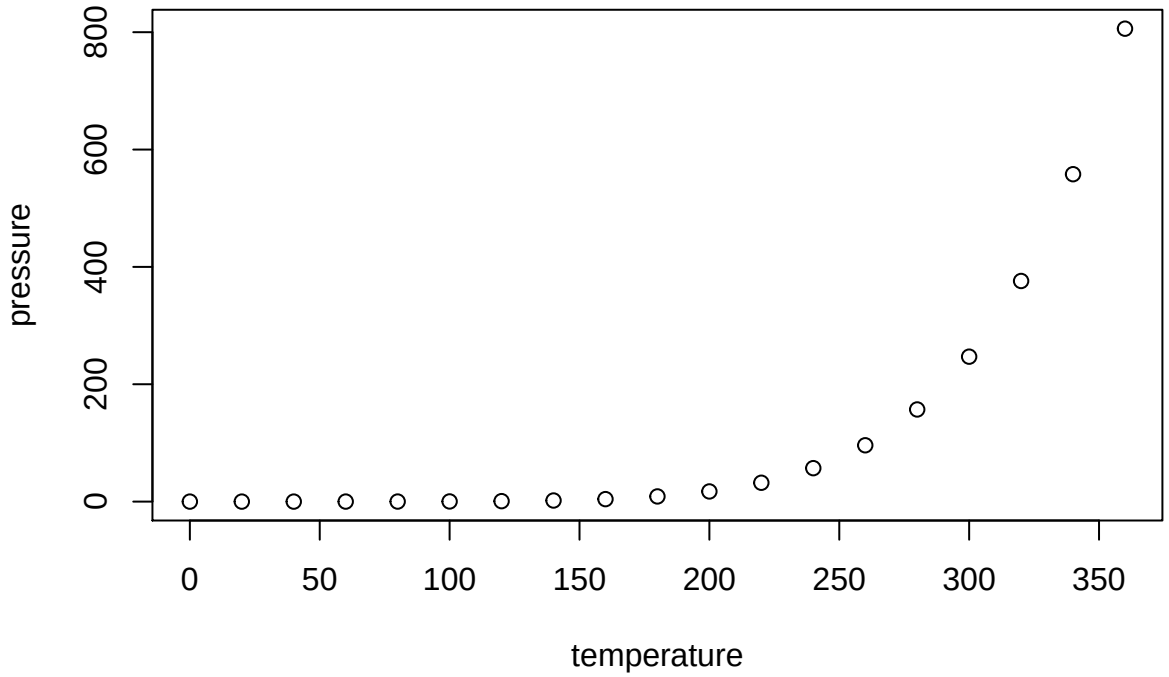
```
summary(pressure)   #summary statistics
```

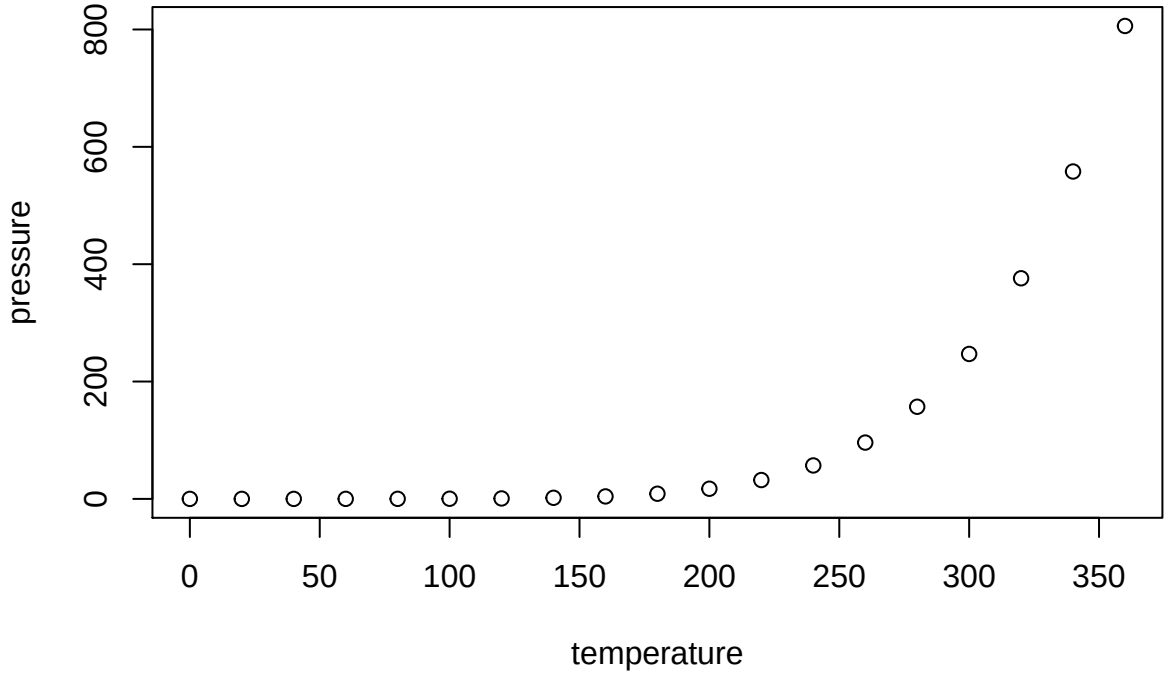
```
##   temperature     pressure
##  Min.   :  0   Min.   :  0.0002
##  1st Qu.: 90   1st Qu.:  0.1800
##  Median :180   Median :  8.8000
##  Mean   :180   Mean   :124.3367
##  3rd Qu.:270   3rd Qu.:126.5000
##  Max.   :360   Max.   :806.0000
```

```
pressure  #full data set
```

```
##    temperature pressure
## 1            0   0.0002
## 2           20   0.0012
## 3           40   0.0060
## 4           60   0.0300
## 5           80   0.0900
## 6          100   0.2700
## 7          120   0.7500
## 8          140   1.8500
## 9          160   4.2000
## 10         180   8.8000
## 11         200  17.3000
## 12         220  32.1000
## 13         240  57.0000
## 14         260  96.0000
## 15         280 157.0000
## 16         300 247.0000
## 17         320 376.0000
## 18         340 558.0000
## 19         360 806.0000
```

```
plot(pressure)
```





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

4. Math environment

$a^2 + b^2 = c^2$

$$H_0 : \rho_1 = 0, H_\alpha : \rho_1 \neq 0$$

5. Appendix of R code

```
eq<-c(18,14,10,15,8,15,6,11,8,7,12,11,23,16,15,25,22,20,16,23)
eq
##note that # inside the r code is to comment out #things
#### mean
mean(eq)
#### variance
var(eq)
#### standard deviation
sd(eq)
#or
sqrt(var(eq))
#### sorting
sort(eq)
#### quartiles
median(eq)
fivenum(eq)
##Range
range(eq)
##IQR
fivenum(eq)[4] - fivenum(eq)[2]
diff(fivenum(eq)[c(2,4)])
```