Test

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10/1/2020

##Chapter 2

Answer 1:

```
a) A more flexible approach will give a better fit. With the larger sample size, there is less concern

b) With the smaller sample size, which implies more noise, there is an expectation that using a large nu

c) Since the relationship is non-linear, a flexible approach is needed to better fit the data and it is

d) This is a classic case of a high noise to signal ratio, so a flexible approach will result in overfi
```

```
Answer 7:

a) obs 1: 3
   obs 2: 2
   obs 3: sqrt(1^2 + 3^2) = sqrt(10)
   obs 4: sqrt(1^2 + 2^2) = sqrt(5)
   obs 5: sqrt(-1^2 + 1^2) = sqrt(2)
   obs 6: sqrt(1^2 + 1^2 + 1^2) = sqrt(3)
```

b) The nearest neighbor with a distance sqrt(2) is observation 5, Green.

c) The three nearest neighbors with distance sqrt(2), 2, and sqrt(3) are observations 5, 2, and 6. Green, Red, and Red.

d) Small. A higher value for K would produce a less flexible, more linear boundary (p.40 in the text).

##Chapter 3

Answer 3:

```
a) iii - The coefficient for the interaction terms show that males earn more than females with the same
b) Salary = 50 + 20*4 + 35*1 + .07*110 + .01*110*4 + 10*4*1 = 50+80+35+7.7+4.4-40 = 137.1 or $137,100
c_ False. We would have to know the standard error, so we could compute significance. If the standard e
```

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.

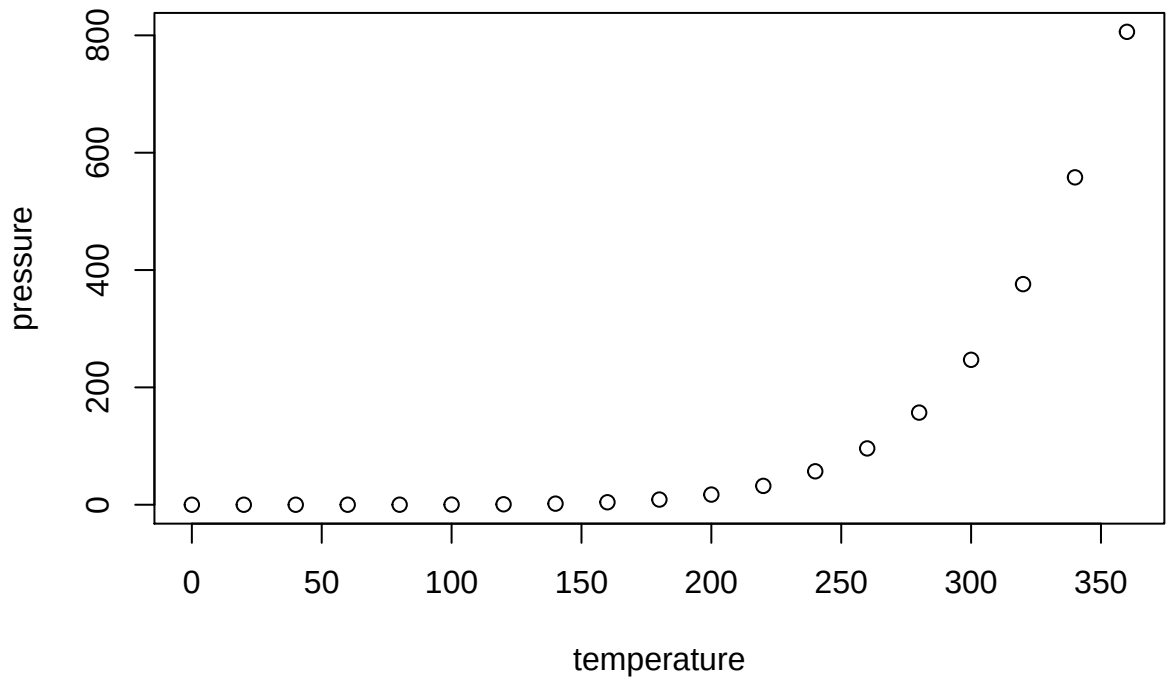
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist       
##  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
```

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.