The chickwts example

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0.1 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:

0.2 Chicken Weights by Feed Type

Newly hatched 71 chicks were randomly allocated into six groups, and each group was given a different feed supplement. Their weights in grams after six weeks are recorded along with feed types.

```
str(chickwts)
```

```
## 'data.frame':    71 obs. of  2 variables:
##  $ weight: num  179 160 136 227 217 168 108 124 143 140 ...
##  $ feed  : Factor w/ 6 levels "casein","horsebean",..: 2 2 2 2 2 2 2 2 2 2 ...
```

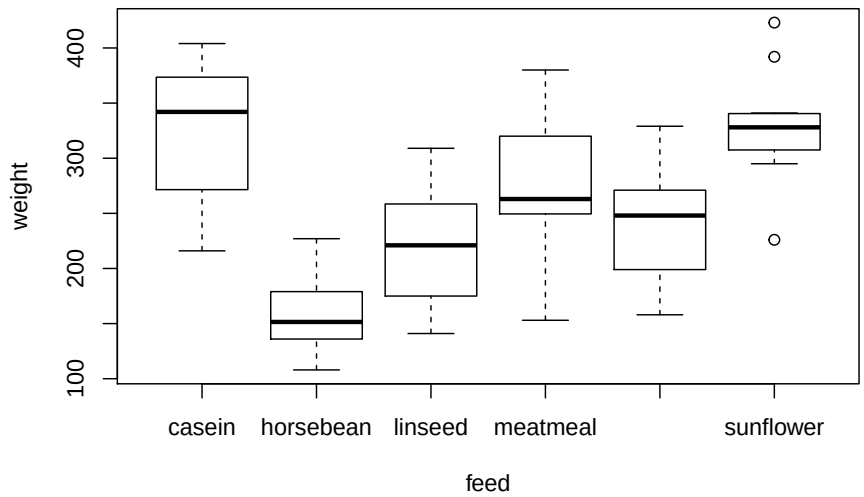
0.3 Computing numerical summaries

```
aggregate(weight ~ feed, data = chickwts, mean)
```

```
##        feed   weight
## 1    casein 323.5833
## 2 horsebean 160.2000
## 3   linseed 218.7500
## 4  meatmeal 276.9091
## 5   soybean 246.4286
## 6 sunflower 328.9167
```

0.4 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.

0.5 One-way analysis of variance

We can compare the effects of diet supplements on chick weights.

```
anova(lm(weight ~ feed, data = chickwts))
```

```
## Analysis of Variance Table
##
## Response: weight
##           Df Sum Sq Mean Sq F value    Pr(>F)
## feed       5 231129   46226  15.365 5.936e-10 ***
## Residuals 65 195556    3009
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

0.5.1 The end