RWorksheet6

2022-12-22

```
data(mpg)
as.data.frame(data(mpg))
data(mpg)
mpg

str(mpg)
library(dplyr)
glimpse(mpg)

#1
datampg <- glimpse(mpg)
ncol(mpg)
nrow(mpg)

#2
total <- mpg %>%
  group_by(manufacturer) %>%
  tally(sort = TRUE)
#2a
datampg <- glimpse(mpg)
unique <- datampg %>% group_by(manufacturer, model) %>%
  distinct() %>% count()
unique
colnames(unique) <- c("Manufacturer", "Model", "Counts")
unique
#2b
qplot(model, data = mpg, geom = "bar", fill = manufacturer)
ggplot(mpg, aes(model, manufacturer)) + geom_point()

#3
datampg <- mpg
relationship <- datampg %>% group_by(manufacturer, model) %>%
  distinct() %>% count()
relationship
#3a
ggplot(mpg, aes(model, manufacturer)) + geom_point()
#3b
ggplot(mpg, aes(model, manufacturer)) +
  geom_point() +
  geom_jitter()

#4
datampg <- unique %>% group_by(Model) %>% count()
datampg
```

```
colnames(datampg) <- c("Model", "Counts")
#4a
qplot(model, data = mpg, main = "Number of Cars per model", xlab = "Model",
      ylab = "Number of Cars",
      geom = "bar", fill = manufacturer) + coord_flip()
#4b
modelcars <- mpg %>%
  group_by(model) %>%
  tally(sort = TRUE)

#5a
ggplot(data = mpg, mapping = aes(x = displ, y = cyl, main = "Relationship between No of Cylinders and
                                      Engine Displacement")) + geom_point(mapping = aes(colour = "engine
#5b
#Answer: The graph is jittered. The pink dots that are horizontal the engine displacements.

#6a
ggplot(data = mpg, mapping = aes(x = drv, y = class)) + geom_point(mapping=aes(color=class)) +
  geom_tile()
#6b
#Answer: Areas that are black are mapped using the geometric point graph. y object is class and x objec

#7
#1st Code
ggplot(data = mpg) +
  geom_point(mapping = aes(x = displ, y = hwy, colour = "blue"))
#2nd Code
ggplot(data = mpg) +
  geom_point(mapping = aes(x = displ, y = hwy), colour = "blue")

#8
?mpg
#8a
#Answer: manufacturer, model, trans, drv, fl, and class.
#8b
#Answer: Double or Integers.
#8c
ggplot(mpg, aes(x = displ, y = hwy, colour = cty)) + geom_point()
#Answer: The data monitors the cty by placing the cty in different hues of color blue.
```

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:

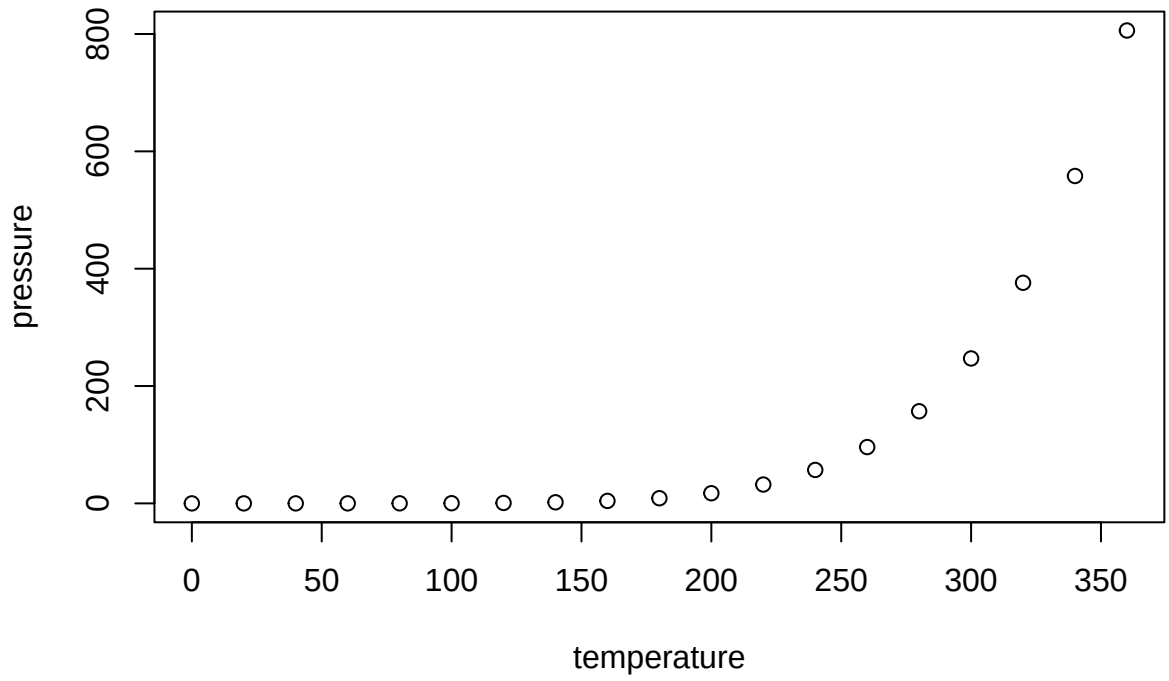
```
summary(cars)
```

```
##      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.