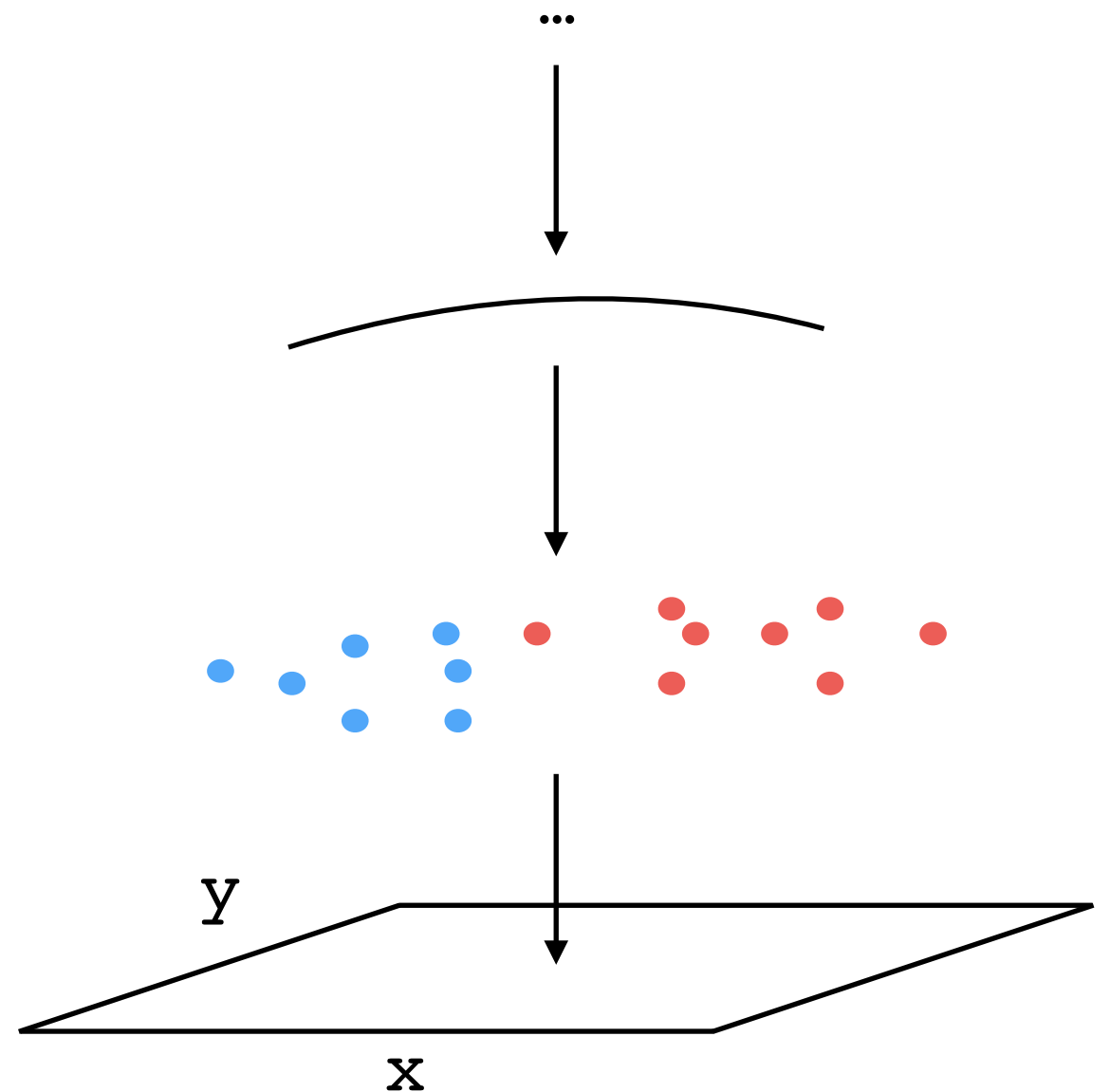


# More about ggp1ot2

Lab 2  
1/24/18

# Layers in ggplot

```
...  
+  
geom_line()  
+  
geom_point(aes(color=z))  
+  
ggplot(data, aes(x=x, y=y))
```

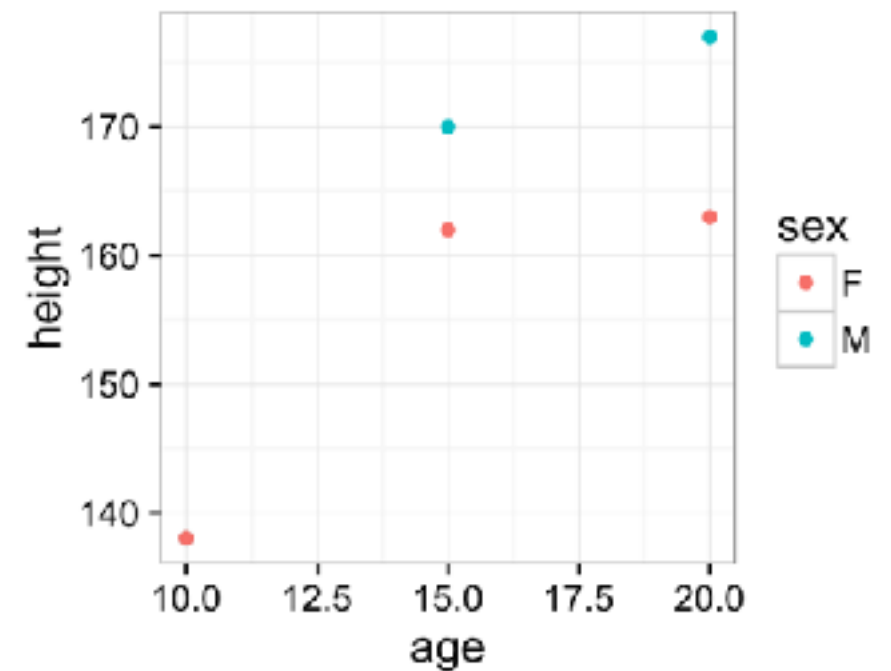


# In real life we make plots differently

```
ggplot(data, aes(x=age,  
y=height, color=sex)) +  
  geom_point()
```

In class

In real life



# We want to visualize data in the data set

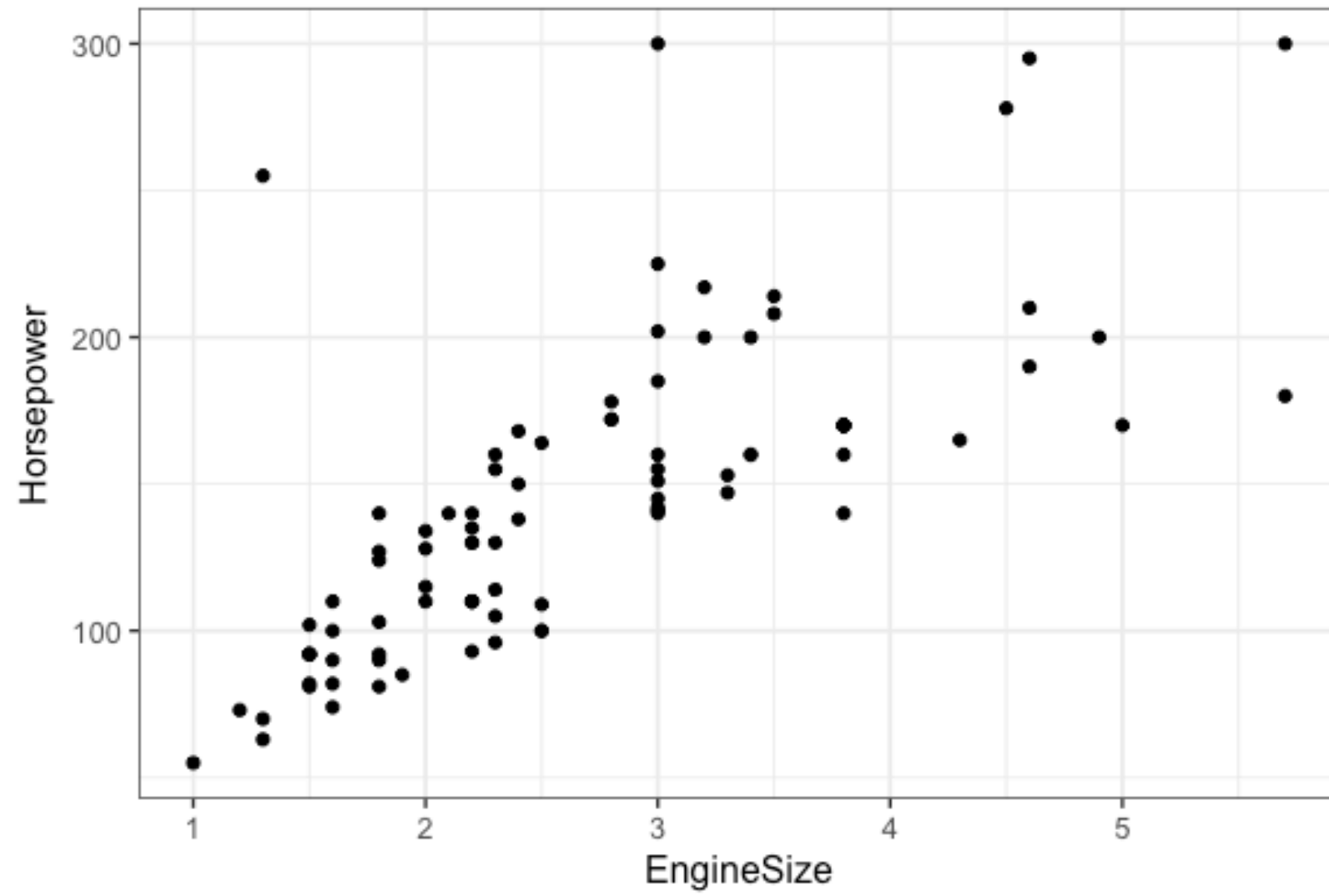
## Cars93

```
Console ~/Desktop/projects/
> head(Cars93)
  Manufacturer  Model  Type  Min.Price  Price  Max.Price  MPG.city  MPG.highway
1      Acura  Integra  Small      12.9  15.9    18.8      25      31
2      Acura  Legend  Midsize     29.2  33.9    38.7      18      25
3       Audi    90  Compact     25.9  29.1    32.3      20      26
4       Audi   100  Midsize     30.8  37.7    44.6      19      26
5        BMW   535i  Midsize     23.7  30.0    36.2      22      30
6      Buick  Century  Midsize     14.2  15.7    17.3      22      31

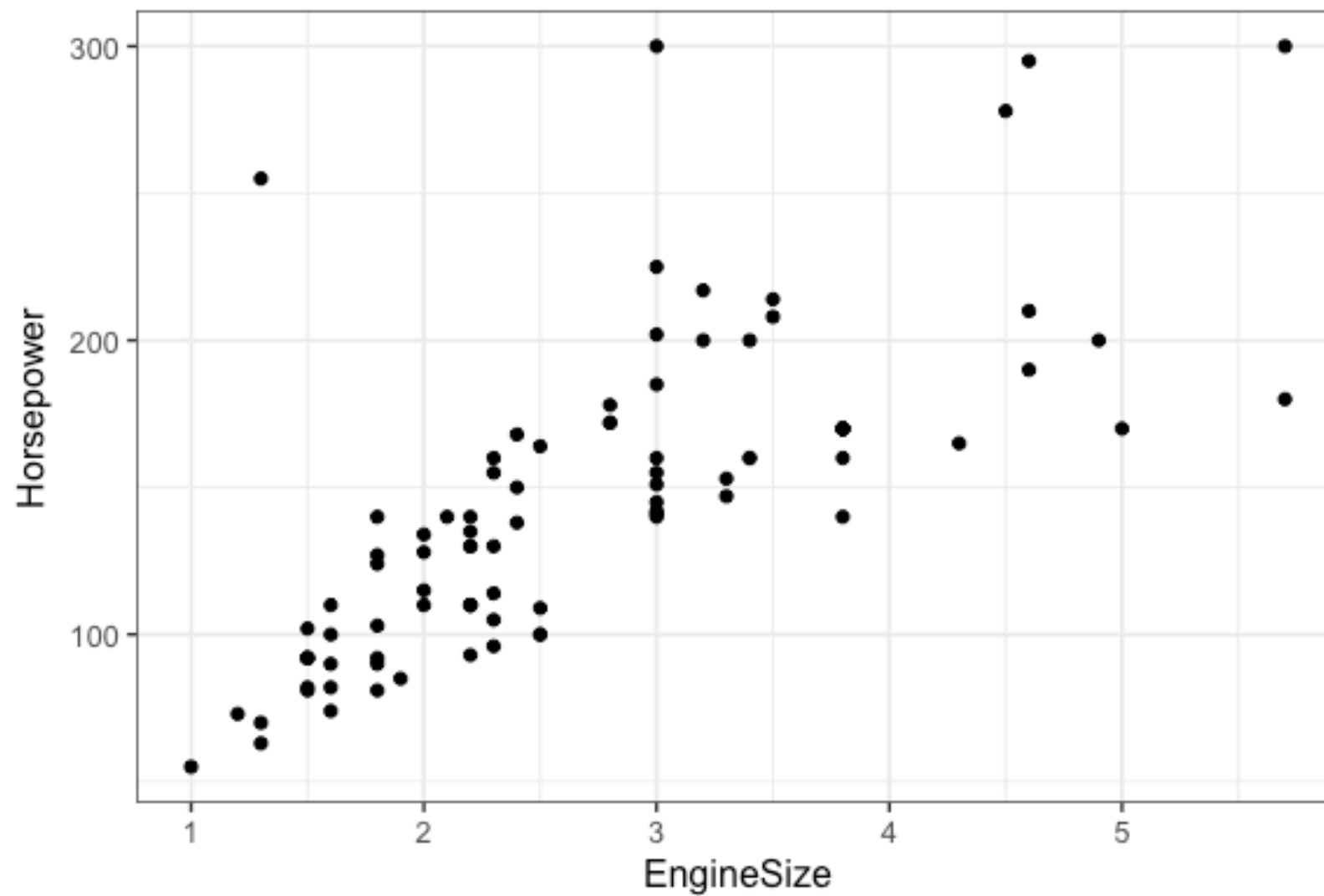
  AirBags  DriveTrain  Cylinders  EngineSize  Horsepower  RPM  Rev.per.mile
1      None      Front        4          1.8        140  6300        2890
2  Driver & Passenger  Front        6          3.2        200  5500        2335
3  Driver only      Front        6          2.8        172  5500        2280
4  Driver & Passenger  Front        6          2.8        172  5500        2535
5  Driver only      Rear         4          3.5        208  5700        2545
6  Driver only      Front         4          2.2        110  5200        2565

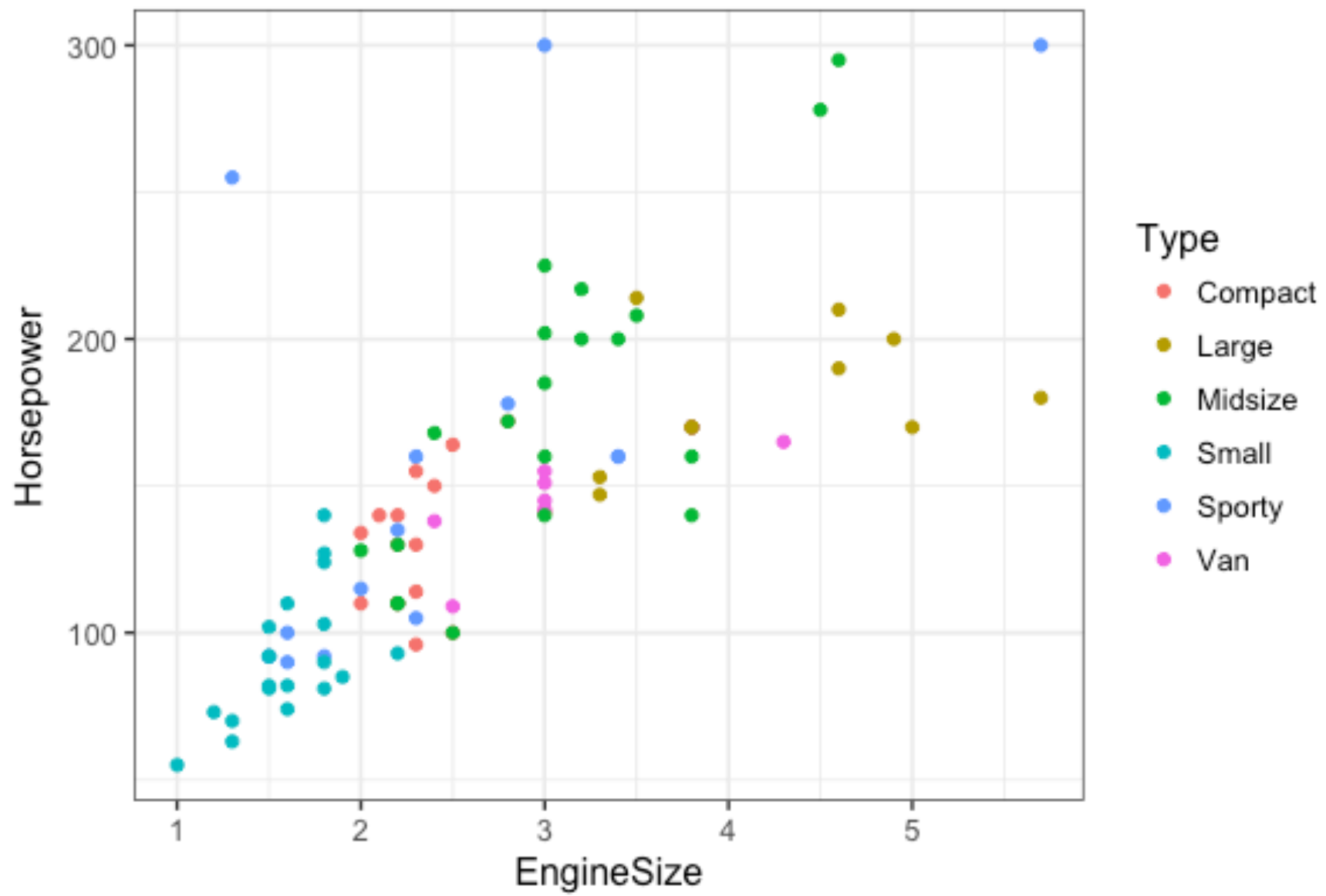
  Man.trans.avail  Fuel.tank.capacity  Passengers  Length  Wheelbase  Width  Turn.circle
1      Yes          13.2          5      177      102      68      37
2      Yes          18.0          5      195      115      71      38
3      Yes          16.9          5      180      102      67      37
4      Yes          21.1          6      193      106      70      37
5      Yes          21.1          4      186      109      69      39
6      No           16.4          6      189      105      69      41

  Rear.seat.room  Luggage.room  Weight  Origin  Make
1      26.5        11      2705  non-USA  Acura  Integra
2      30.0        15      3560  non-USA  Acura  Legend
3      28.0        14      3375  non-USA      Audi  90
4      31.0        17      3405  non-USA      Audi  100
5      27.0        13      3640  non-USA      BMW  535i
6      28.0        16      2880   USA     Buick  Century
```

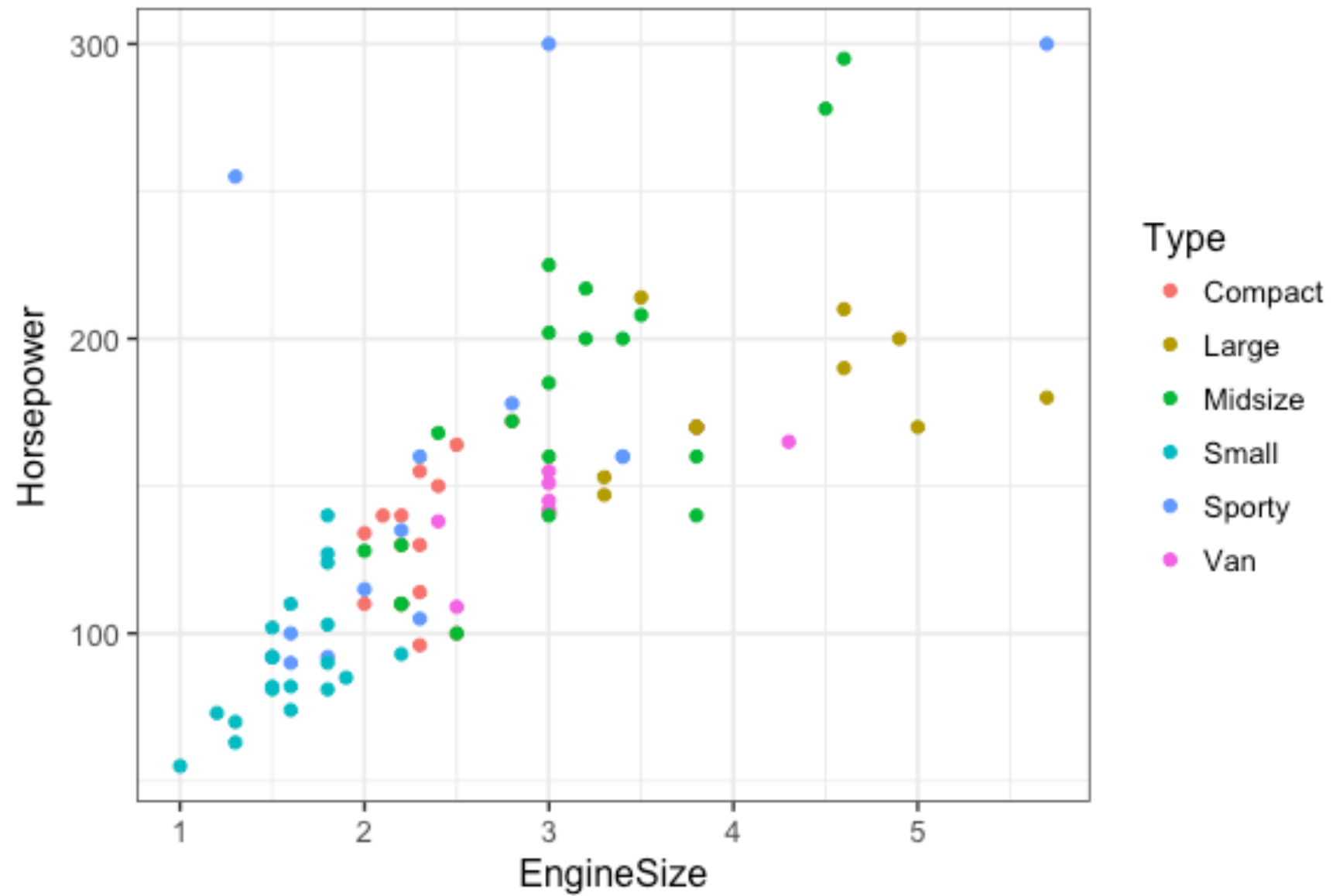


```
ggplot(Cars93, aes(x=EngineSize, y=Horsepower))
  + geom_point()
```



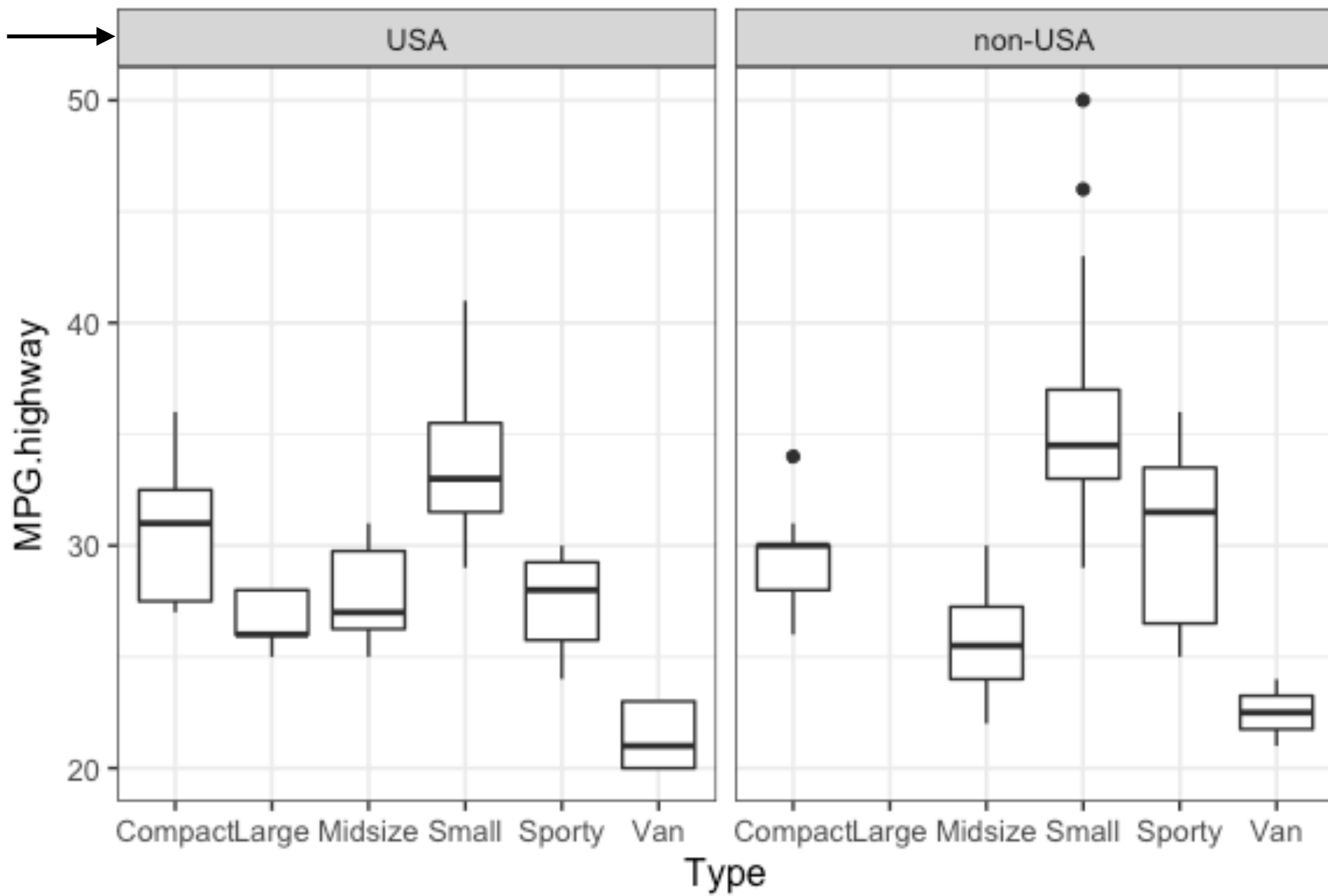


```
ggplot(Cars93, aes(x=EngineSize, y=Horsepower,  
  color=Type)) + geom_point()
```

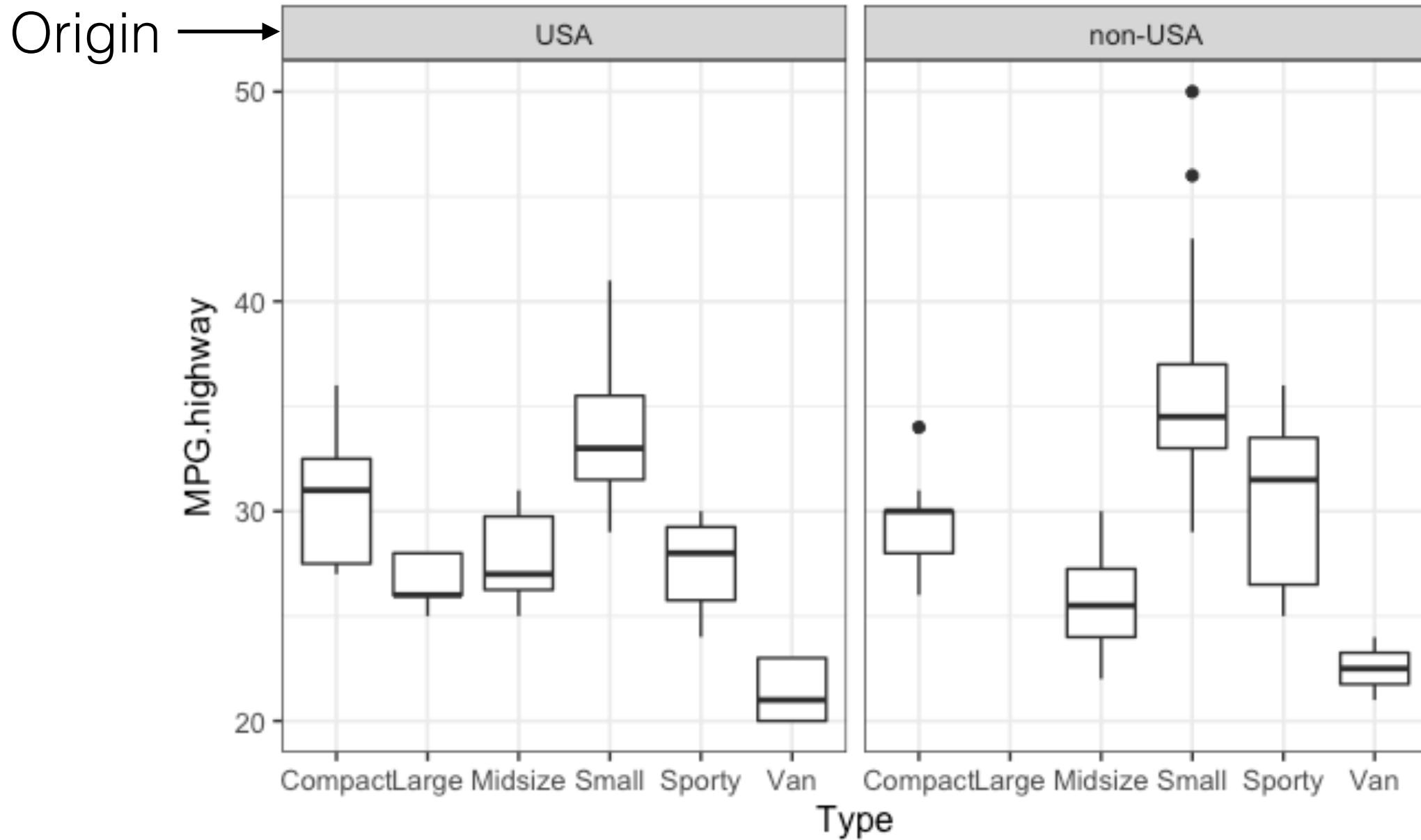




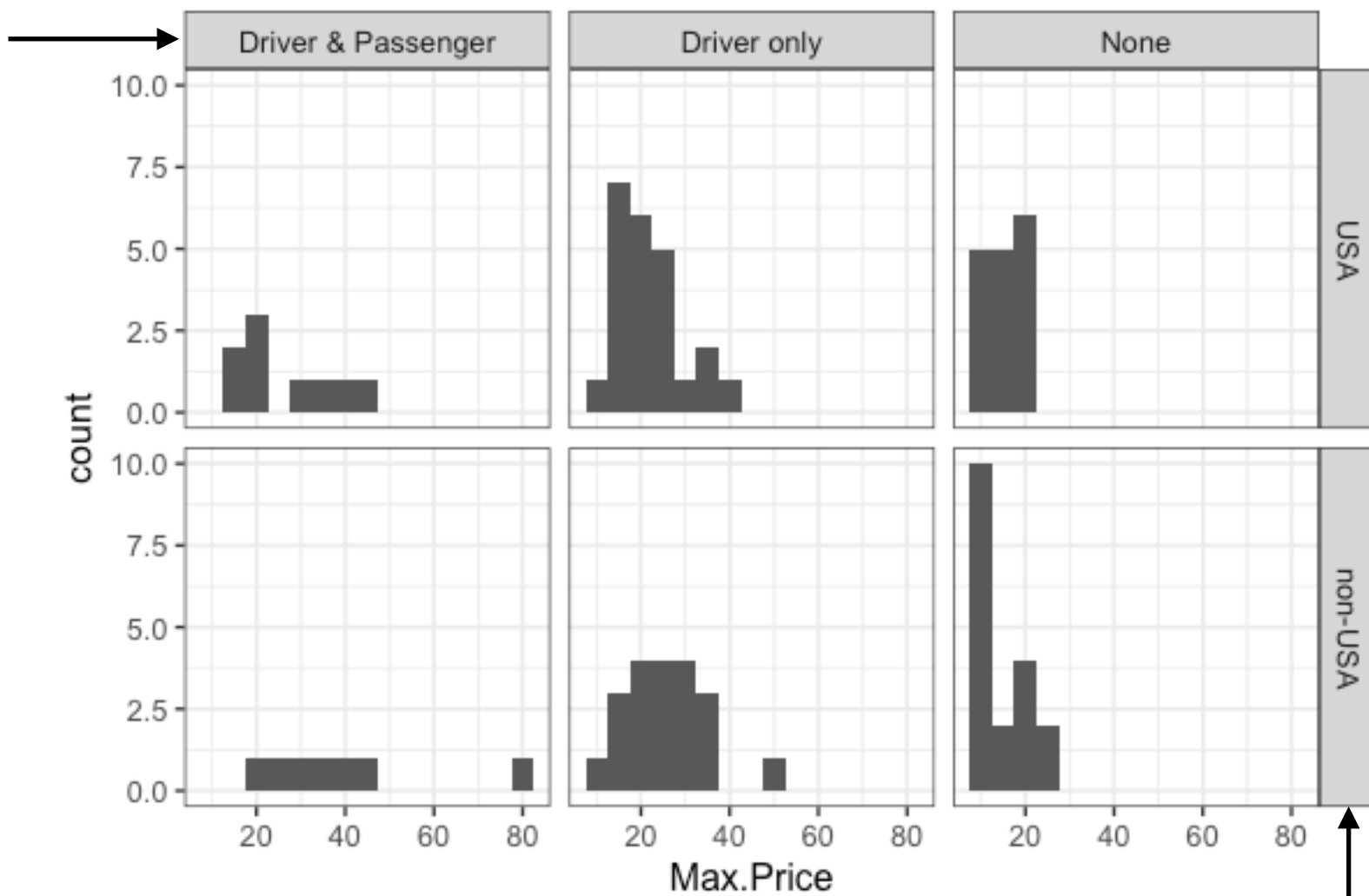
Origin →



```
ggplot(Cars93, aes(x=Type, y=MPG.highway)) +  
  geom_boxplot() + facet_wrap(~Origin)
```

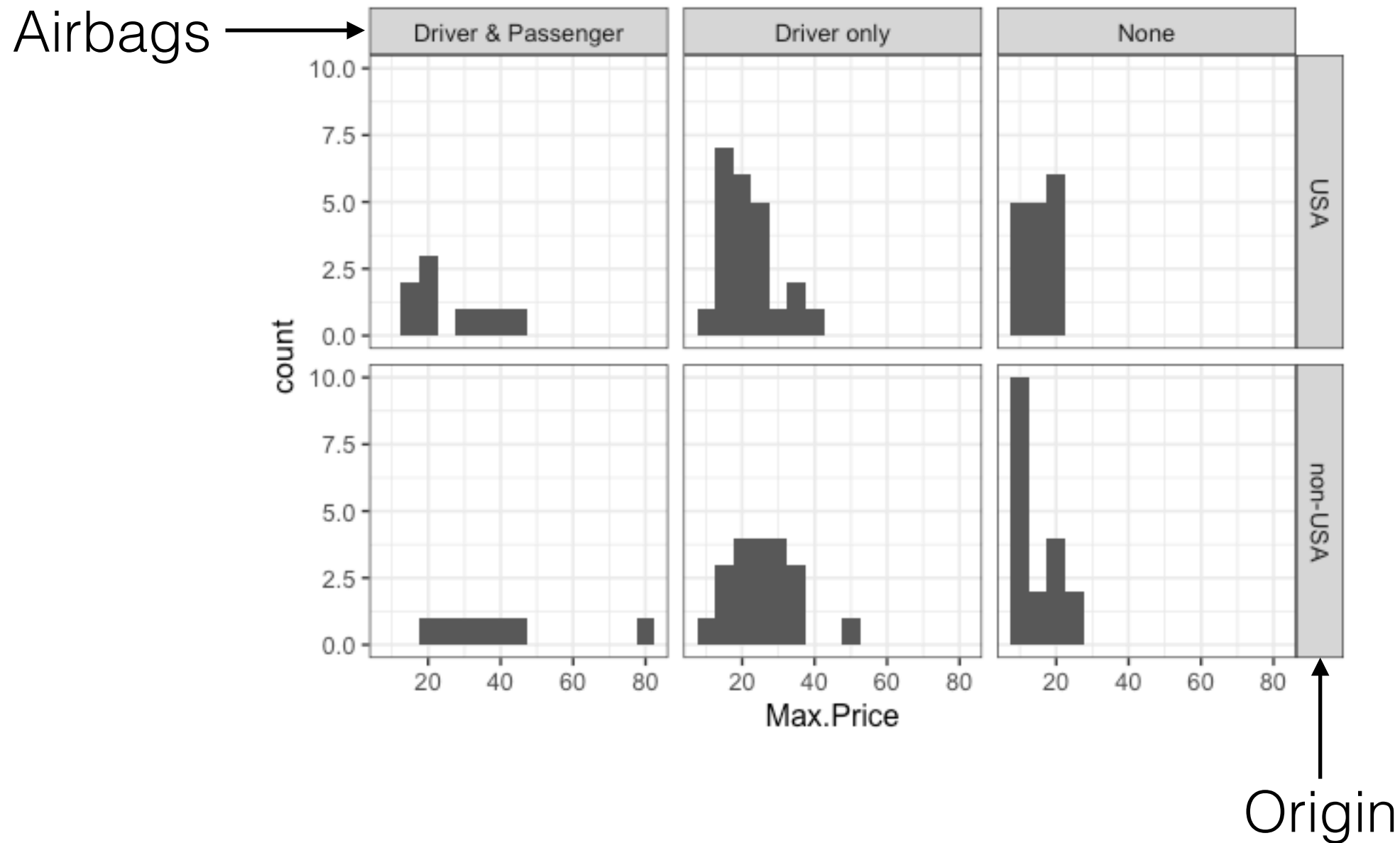


Airbags

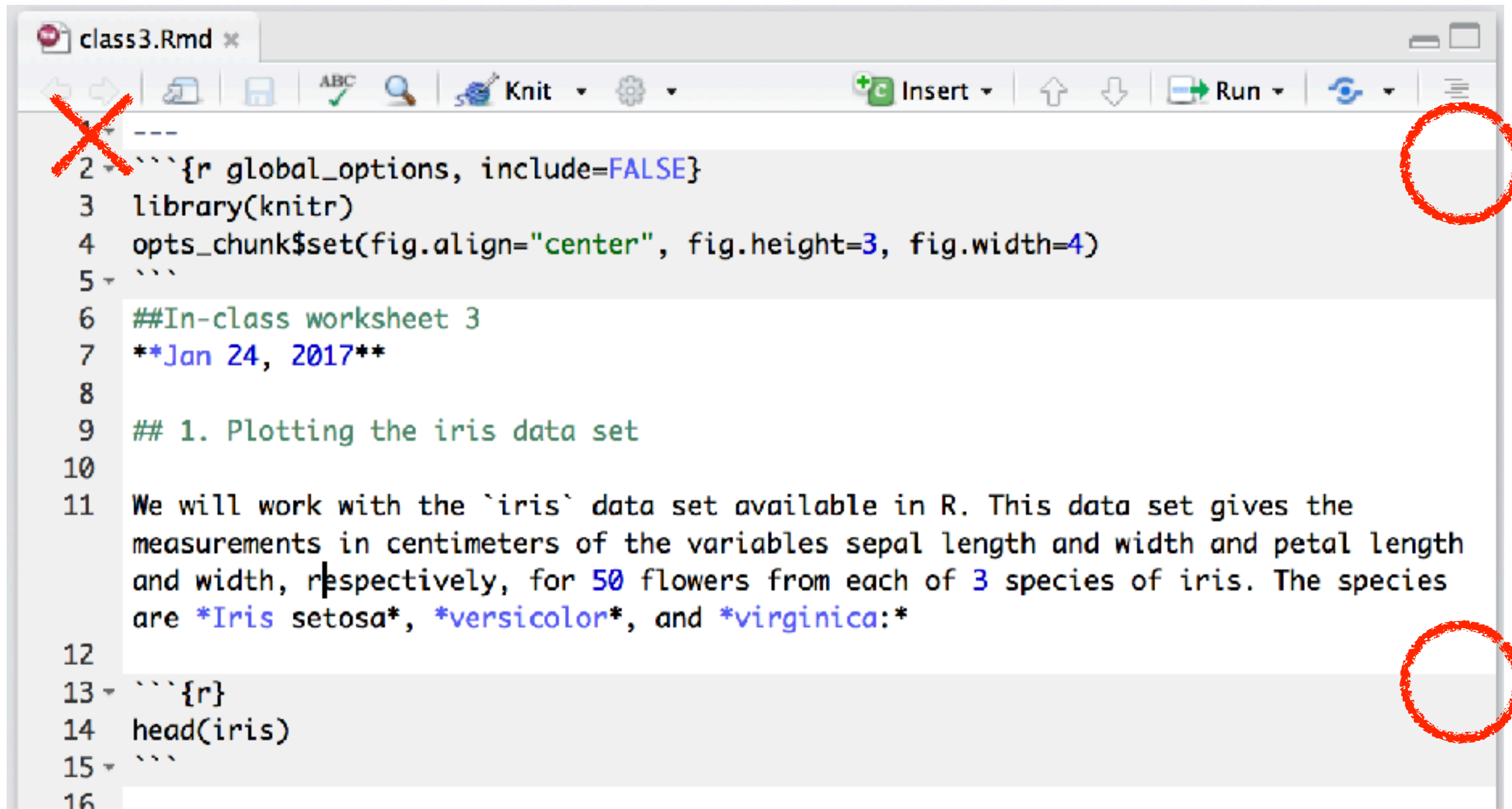


Origin

```
ggplot(Cars93, aes(x=Max.Price)) +  
  geom_histogram(binwidth=5) +  
  facet_grid(Origin~AirBags)
```

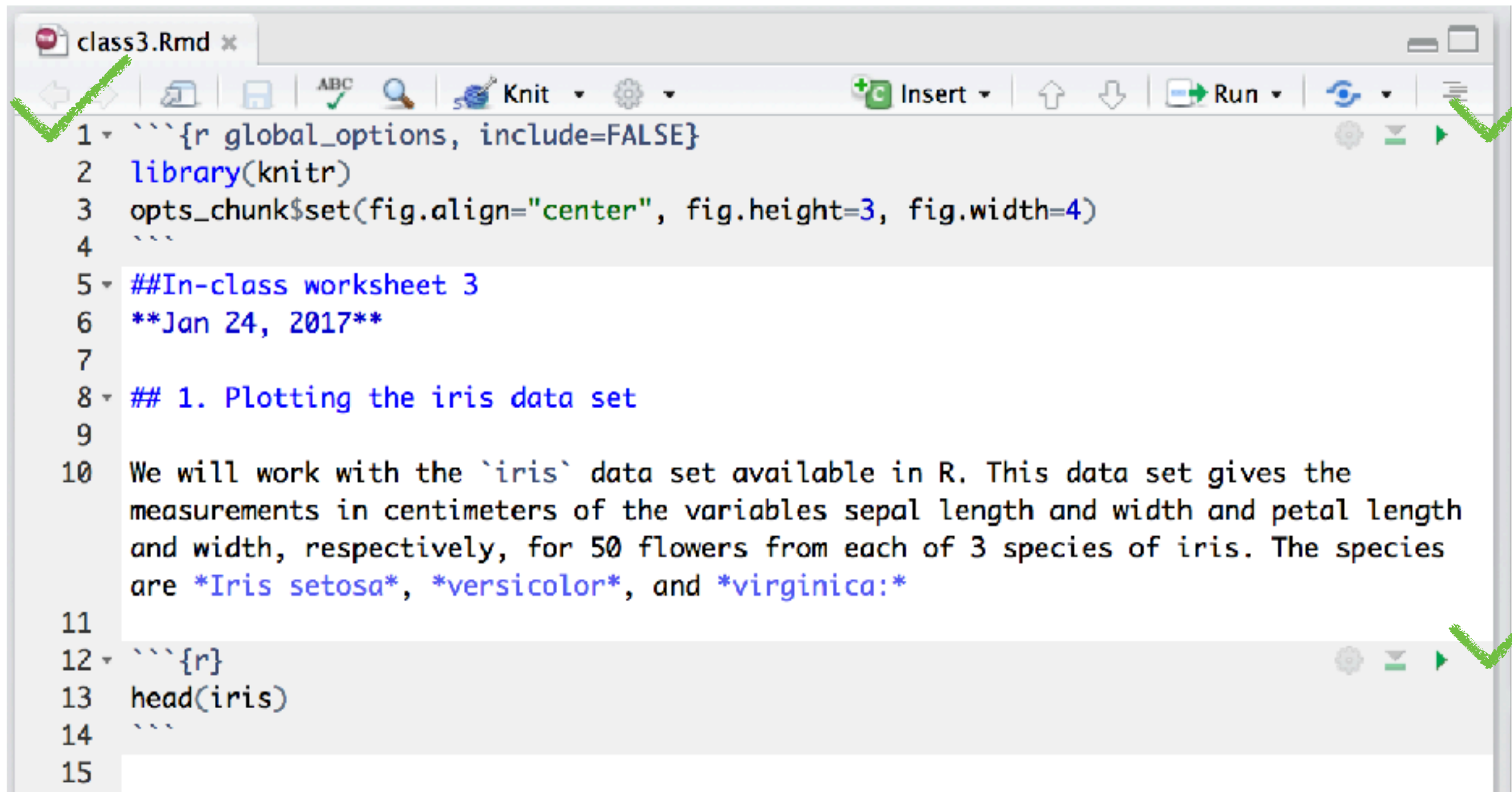


--- at the beginning of .Rmd file



```
class3.Rmd x
---
2  ```{r global_options, include=FALSE}
3  library(knitr)
4  opts_chunk$set(fig.align="center", fig.height=3, fig.width=4)
5  ```
6  ##In-class worksheet 3
7  **Jan 24, 2017**
8
9  ## 1. Plotting the iris data set
10
11  We will work with the `iris` data set available in R. This data set gives the
    measurements in centimeters of the variables sepal length and width and petal length
    and width, respectively, for 50 flowers from each of 3 species of iris. The species
    are Iris setosa, versicolor, and virginica:
12
13  ```{r}
14  head(iris)
15  ```
16
```

--- at the beginning of .Rmd file



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class3.Rmd x
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15
```