

Basics

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Load the tidyverse packages.

```
library(tidyverse)
```

```
## -- Attaching packages -----
```

```
## v ggplot2 3.3.2      v purrr  0.3.4
## v tibble  3.0.3      v dplyr  1.0.2
## v tidyr   1.1.2      v stringr 1.4.0
## v readr   1.3.1      v forcats 0.5.0
```

```
## -- Conflicts -----
```

```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

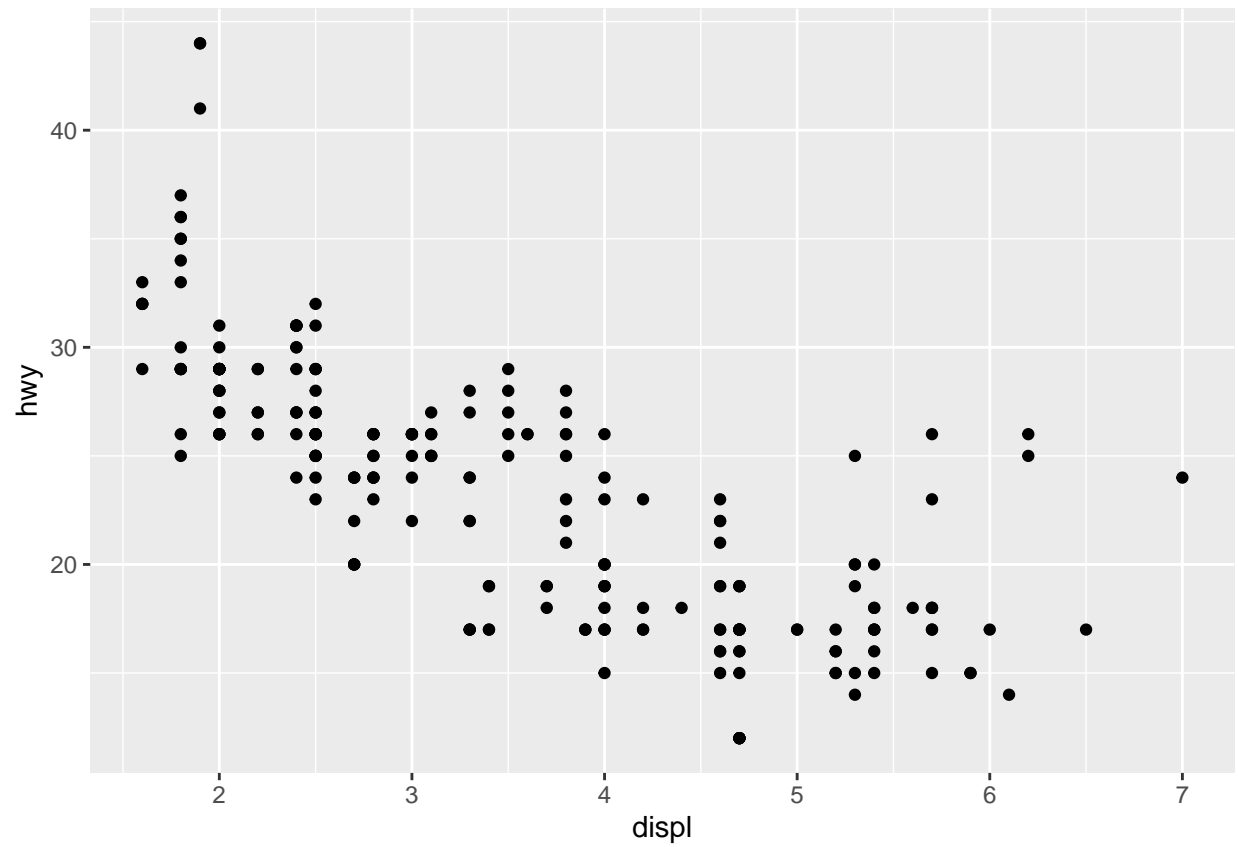
Display the built-in data set, mpg.

```
mpg
```

```
## # A tibble: 234 x 11
##   manufacturer model   displ  year  cyl trans  drv      cty   hwy fl    class
##   <chr>          <chr>    <dbl> <int> <int> <chr>  <chr> <int> <int> <chr> <chr>
## 1 audi          a4         1.8  1999    4 auto(l~ f      18    29 p    comp~
## 2 audi          a4         1.8  1999    4 manual~ f      21    29 p    comp~
## 3 audi          a4         2    2008    4 manual~ f      20    31 p    comp~
## 4 audi          a4         2    2008    4 auto(a~ f      21    30 p    comp~
## 5 audi          a4         2.8  1999    6 auto(l~ f      16    26 p    comp~
## 6 audi          a4         2.8  1999    6 manual~ f      18    26 p    comp~
## 7 audi          a4         3.1  2008    6 auto(a~ f      18    27 p    comp~
## 8 audi          a4 quat~  1.8  1999    4 manual~ 4      18    26 p    comp~
## 9 audi          a4 quat~  1.8  1999    4 auto(l~ 4      16    25 p    comp~
## 10 audi         a4 quat~  2    2008    4 manual~ 4      20    28 p    comp~
## # ... with 224 more rows
```

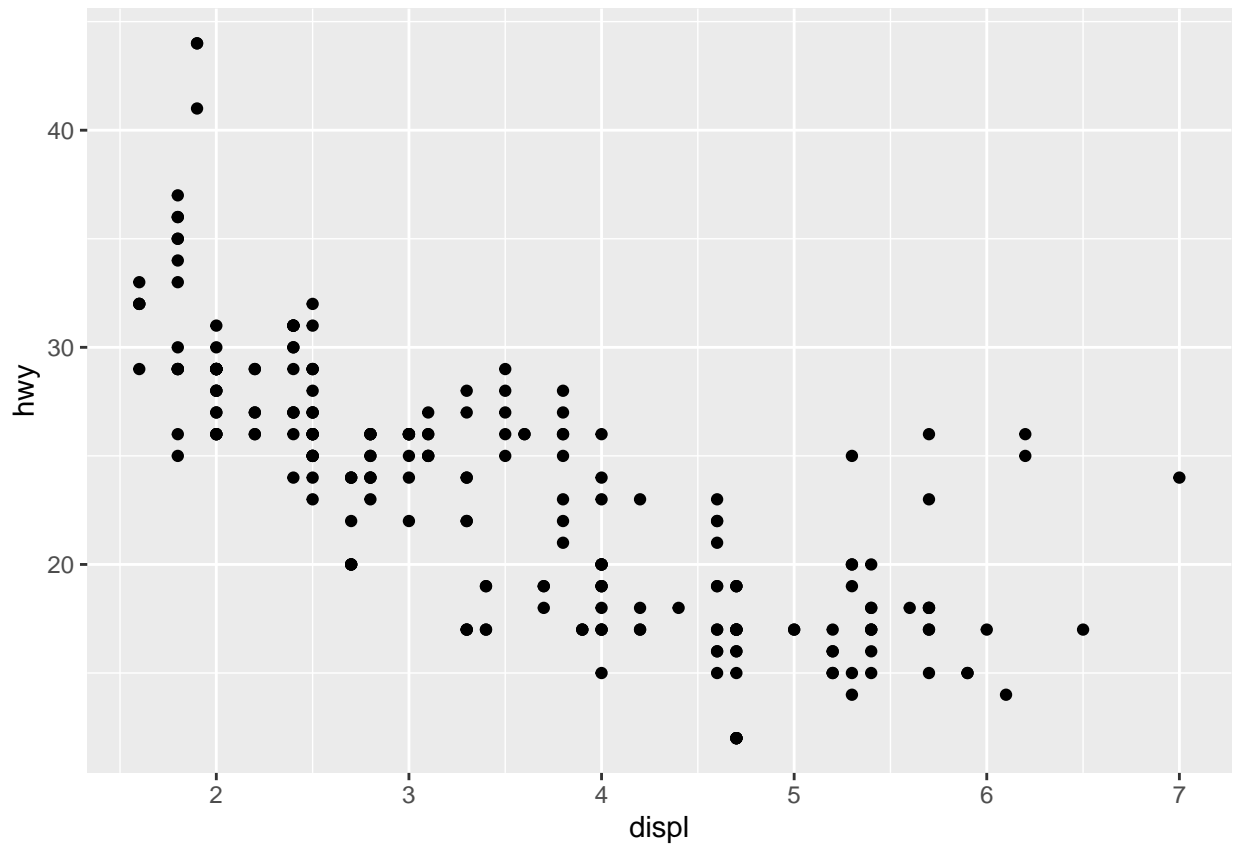
Show a scatter plot of displ times hwy (which is the same as saying engine size times highway gas mileage).

```
ggplot(data=mpg)+
  geom_point(mapping = aes(x=displ,y=hwy))
```



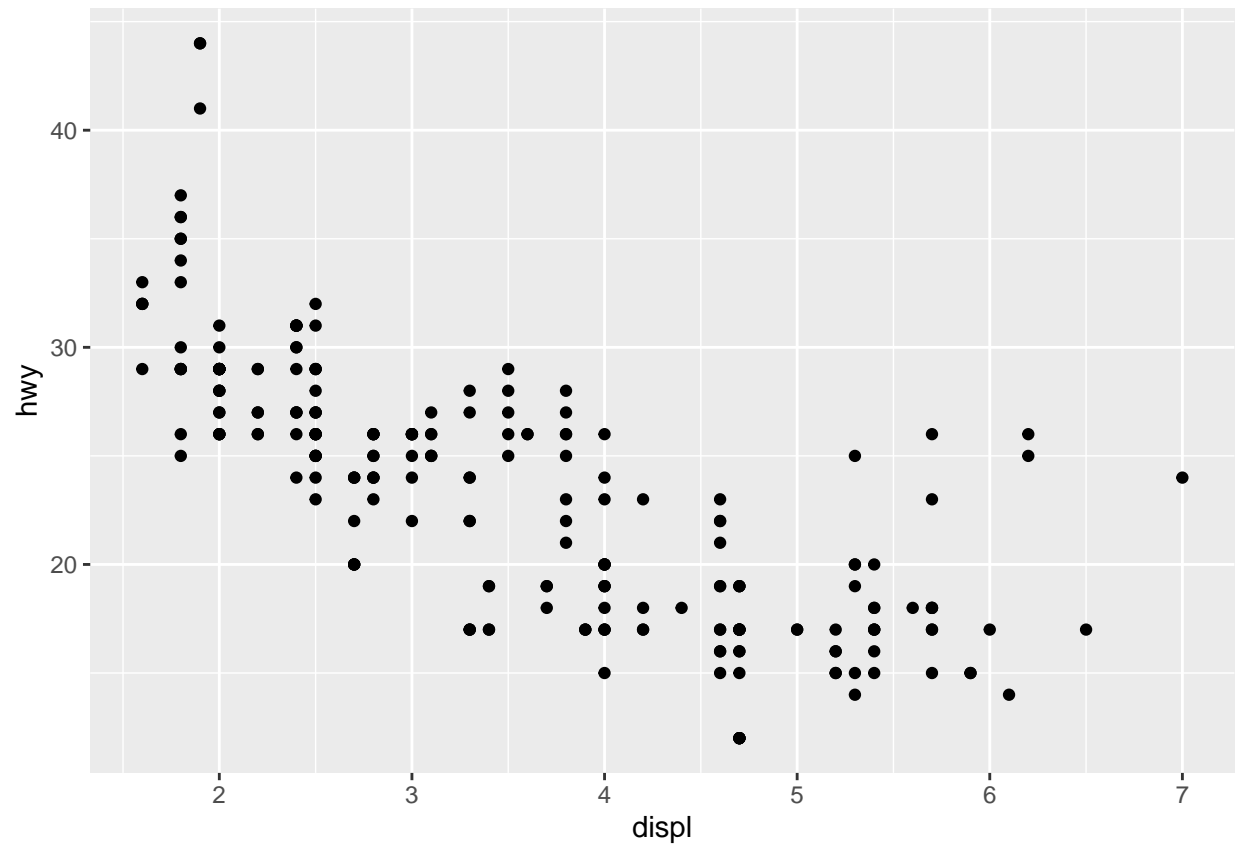
Show the exact same scatter plot.

```
ggplot(data=mpg,mapping = aes(x=displ,y=hwy))+  
  geom_point()
```



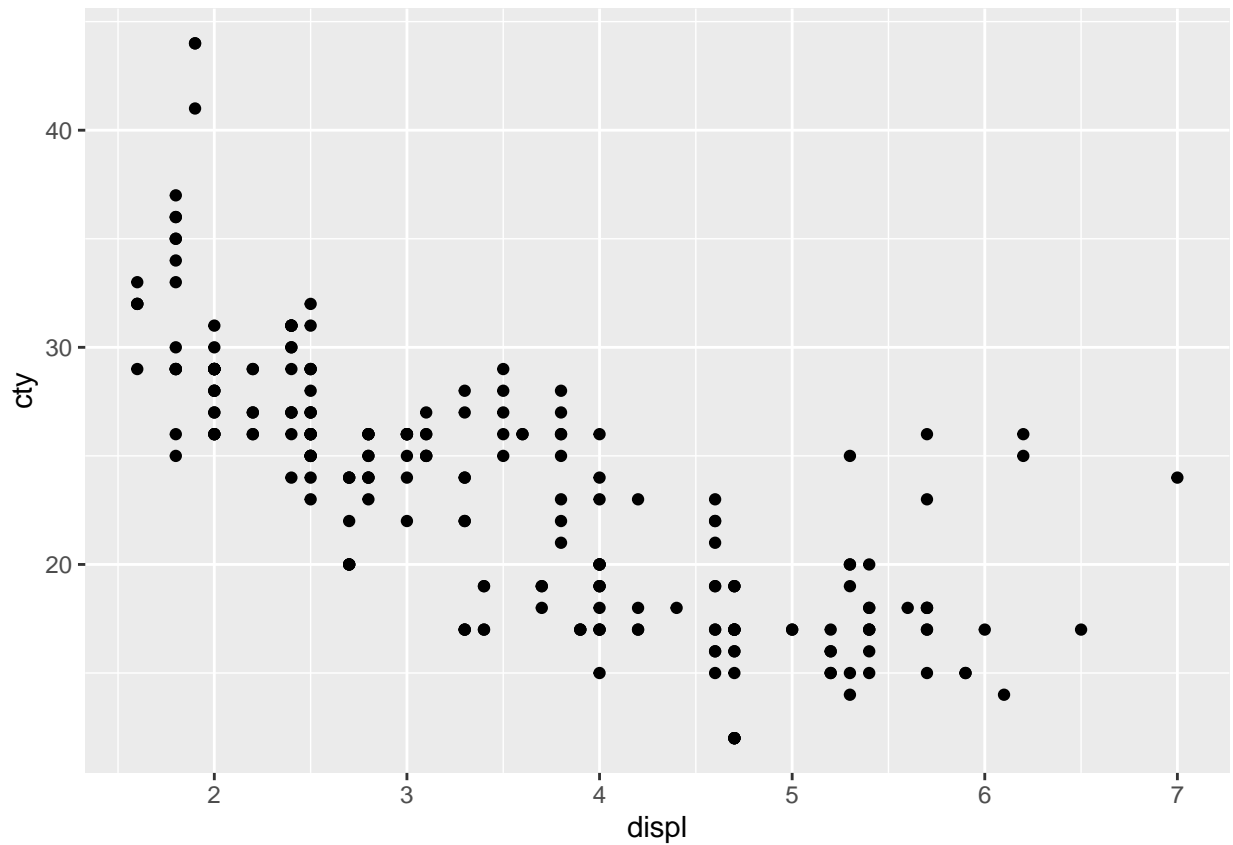
Show the exact same scatter plot.

```
ggplot(mpg,aes(x=displ,y=hwy))+  
  geom_point()
```



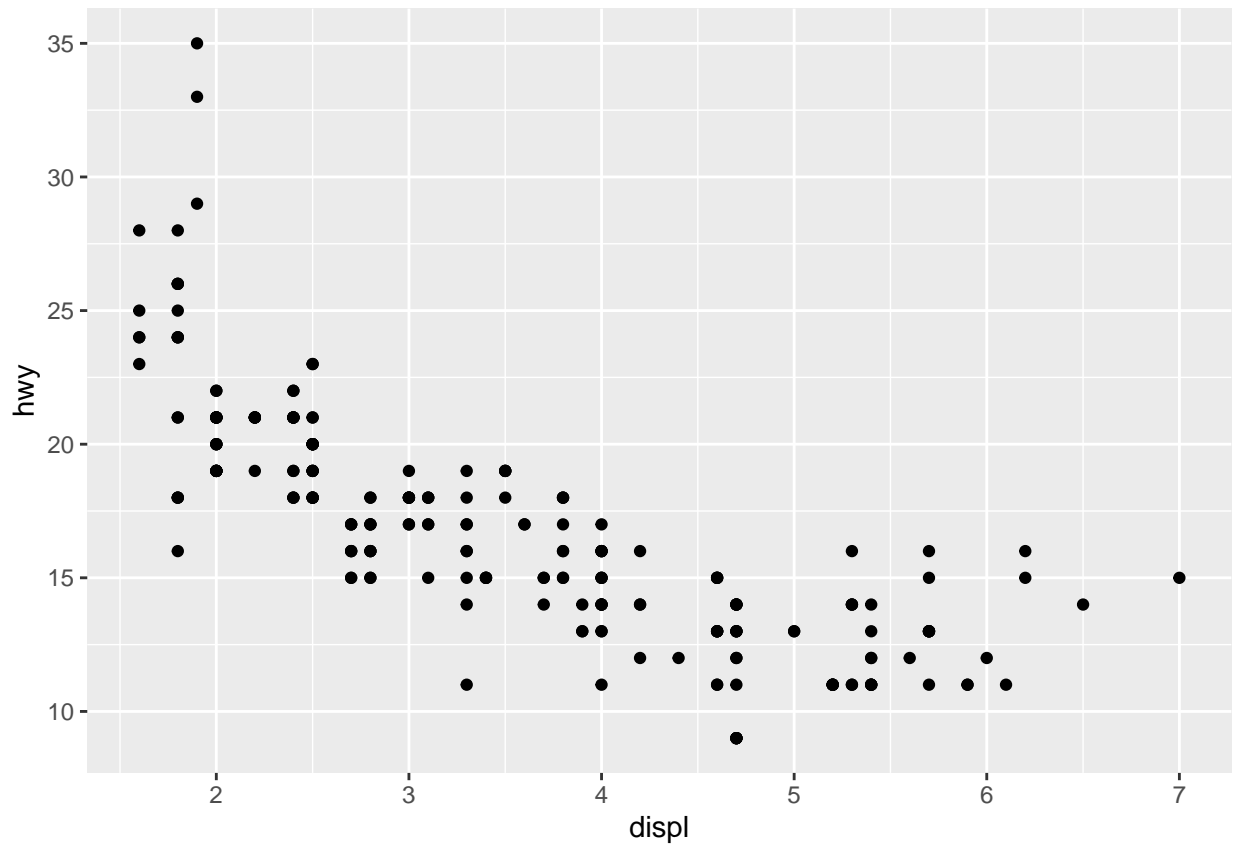
Show the exact same scatter plot.

```
ggplot(mpg,aes(x=displ,y=cty))+  
  geom_point(mpg,mapping=aes(x=displ,y=hwy))
```



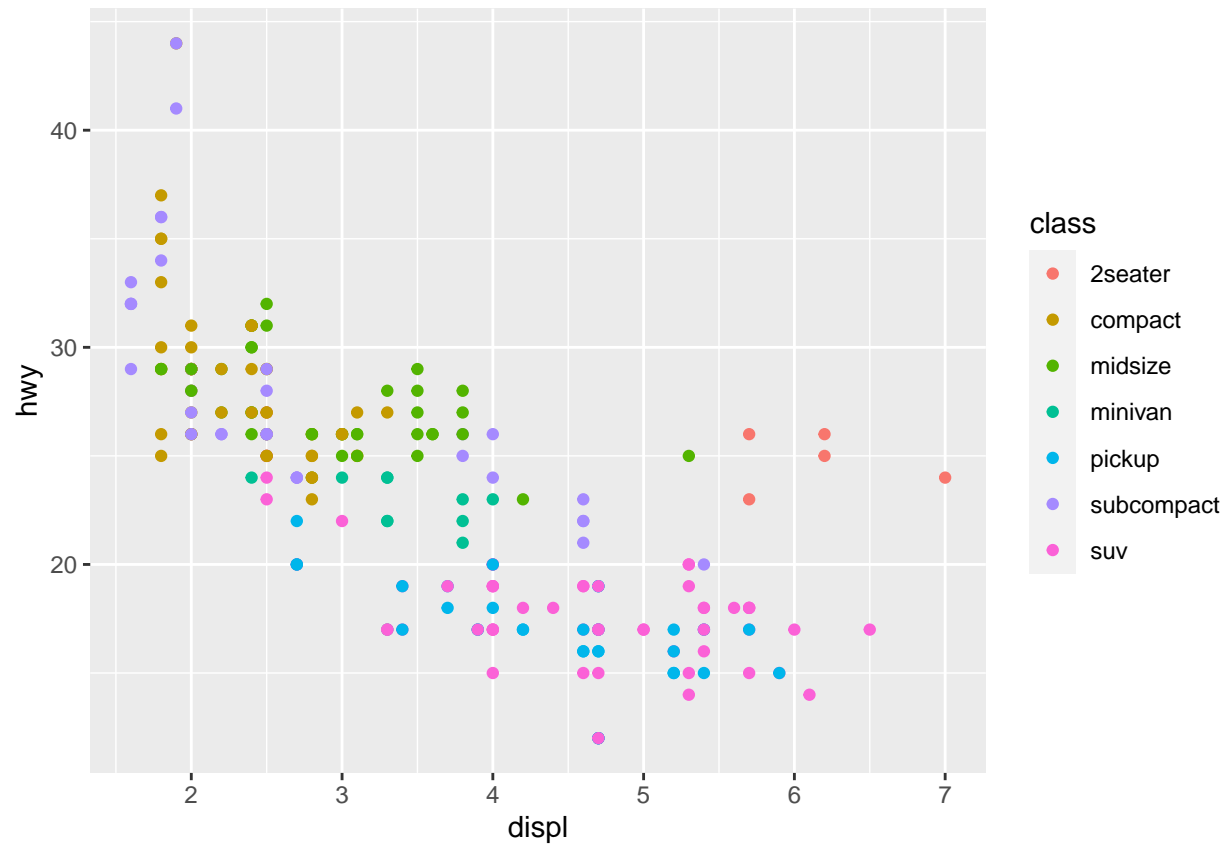
Show a slightly different scatter plot.

```
ggplot(mpg,aes(x=displ,y=hwy))+  
  geom_point(mpg,mapping=aes(x=displ,y=cty))
```



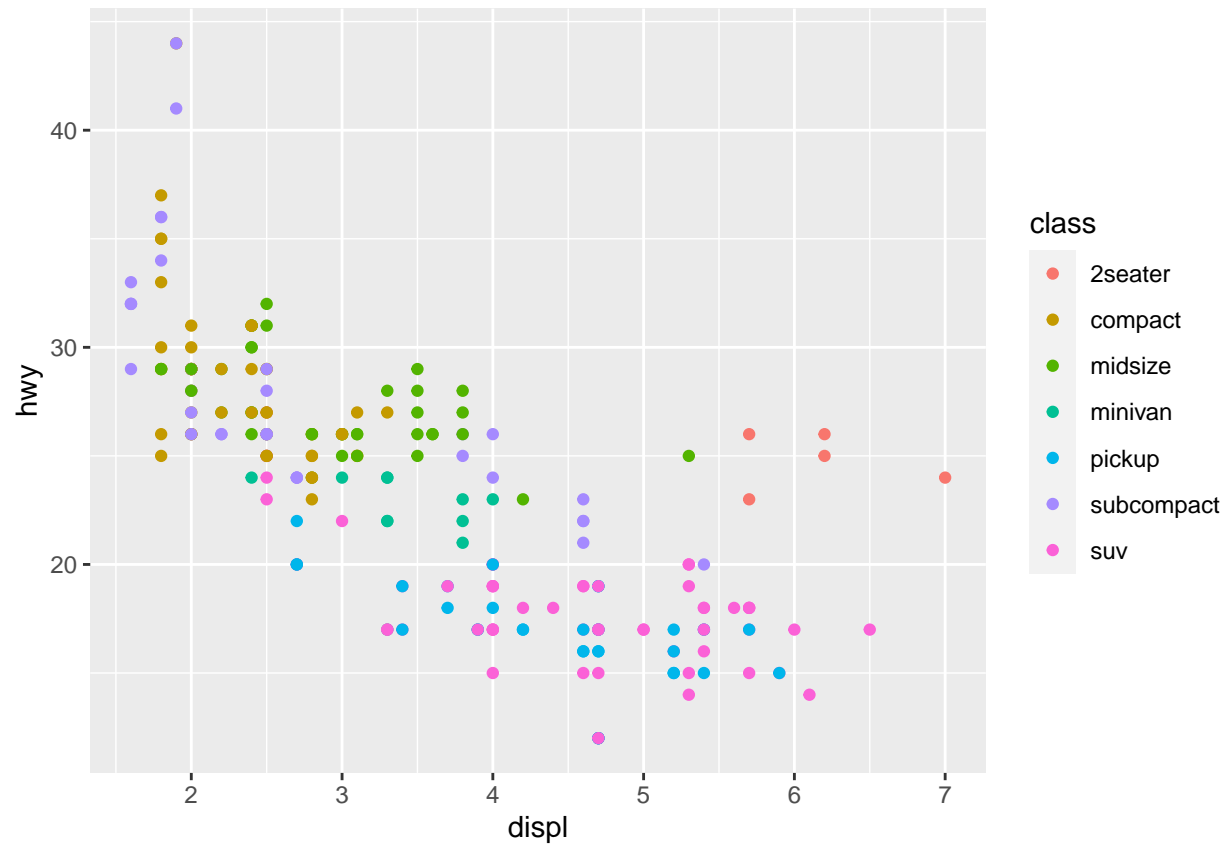
Show the hwy scatter plot except in color.

```
ggplot(mpg,aes(x=displ,y=hwy))+  
  geom_point(mapping=aes(color=class))
```



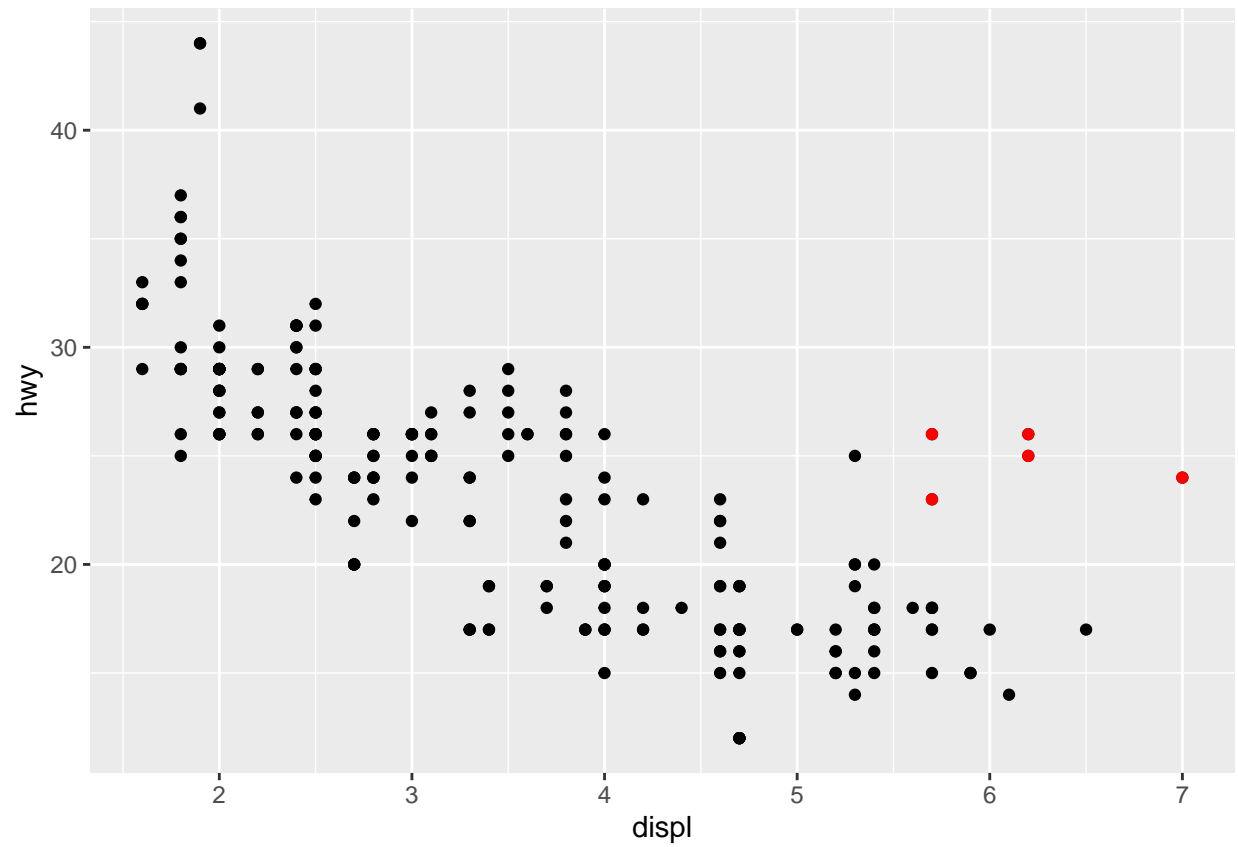
Show the exact same scatter plot.

```
ggplot(mpg,aes(x=displ,y=hwy))+  
  geom_point(aes(color=class))
```



Show the scatter plot in the book where the two-seaters are highlighted in red.

```
ggplot(mpg,aes(x=displ,y=hwy))+  
  geom_point()+  
  geom_point(data=mpg[mpg$class=="2seater",],color="red")
```

In the above code, I selected rows of the data set. Specifically, I selected all rows where class is “2seater”. I colored just those rows red.