

Ch 3-5

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Contents

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.1 --
```

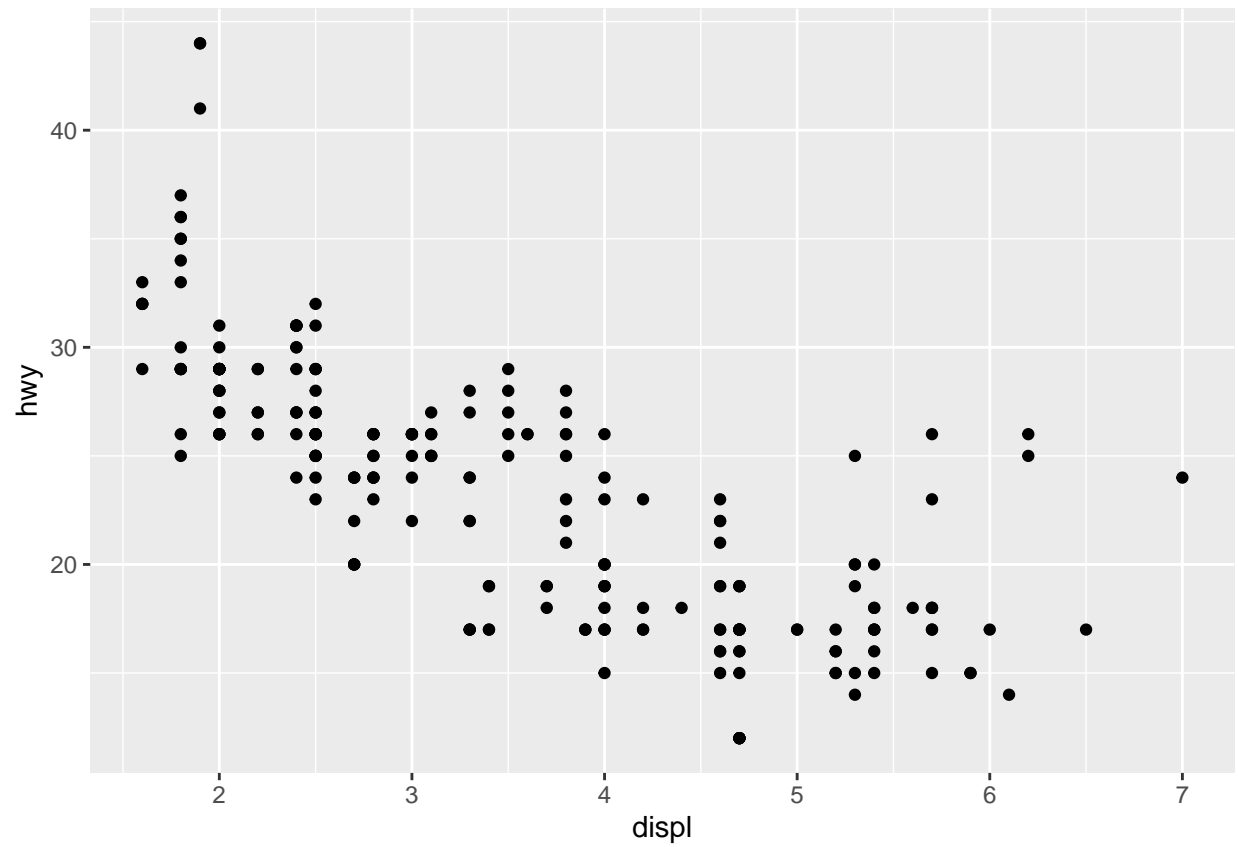
```
## v ggplot2 3.3.5      v purrr   0.3.4
## v tibble  3.1.6      v dplyr   1.0.8
## v tidyr   1.2.0      v stringr 1.4.0
## v readr   2.1.2      v forcats 0.5.1
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

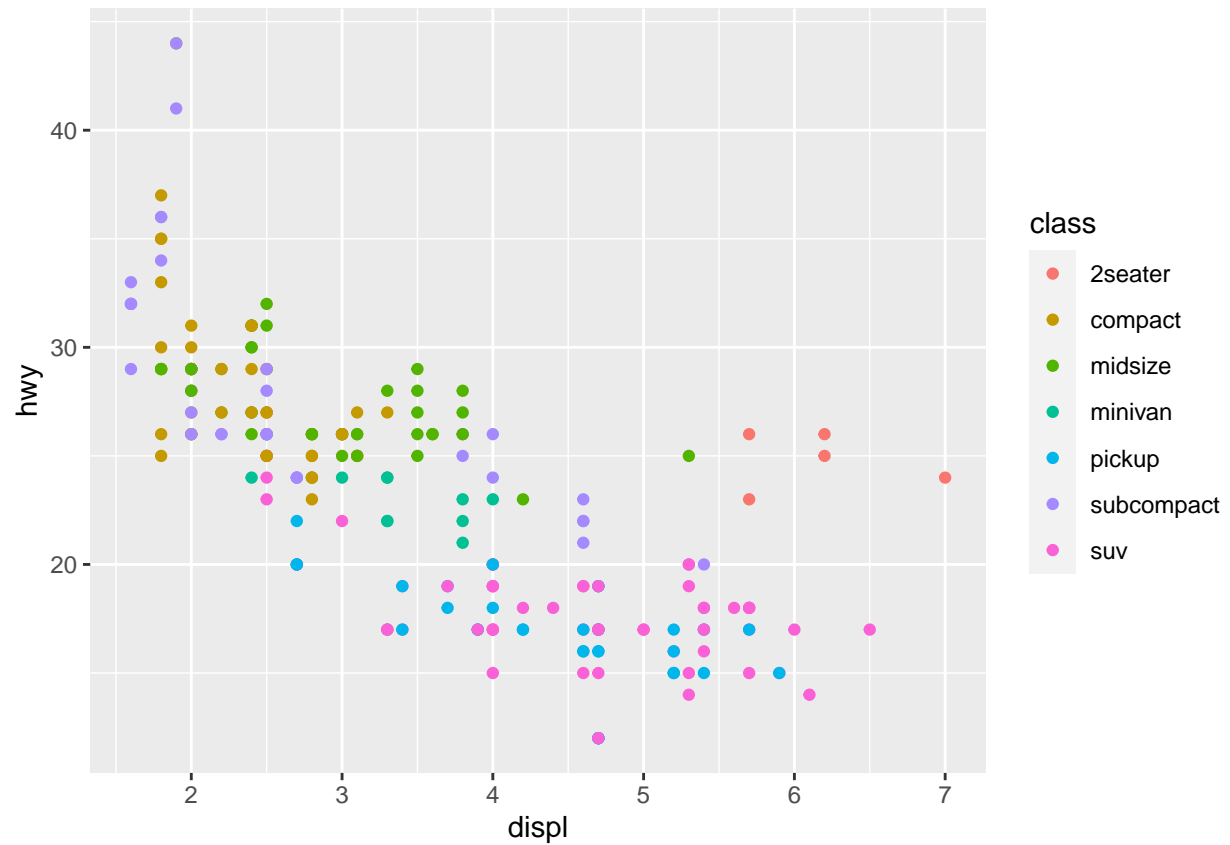
```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
# scatterplot
```

```
mpg %>%
  ggplot(aes(displ, hwy)) +
  geom_point()
```

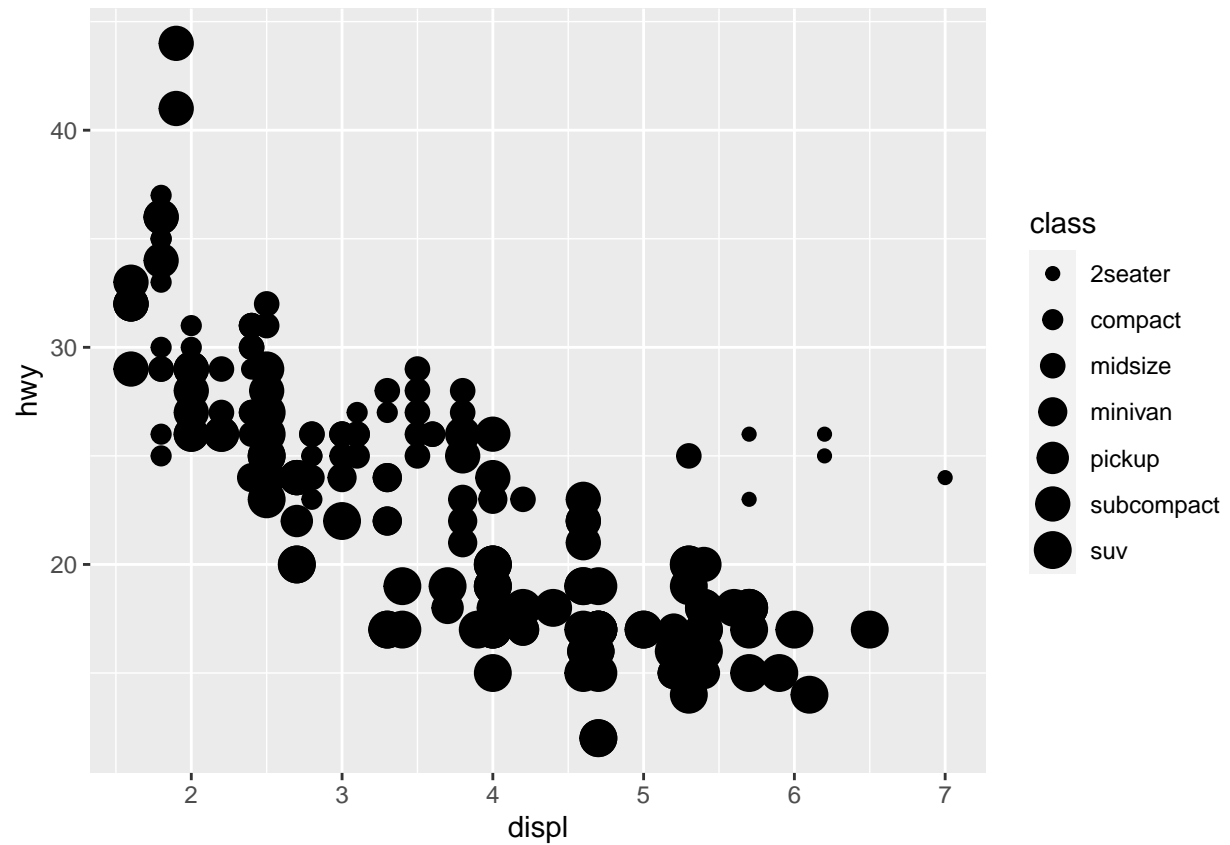


```
# scatterplot with color as class
mpg %>%
  ggplot(aes(displ, hwy, color = class)) +
  geom_point()
```



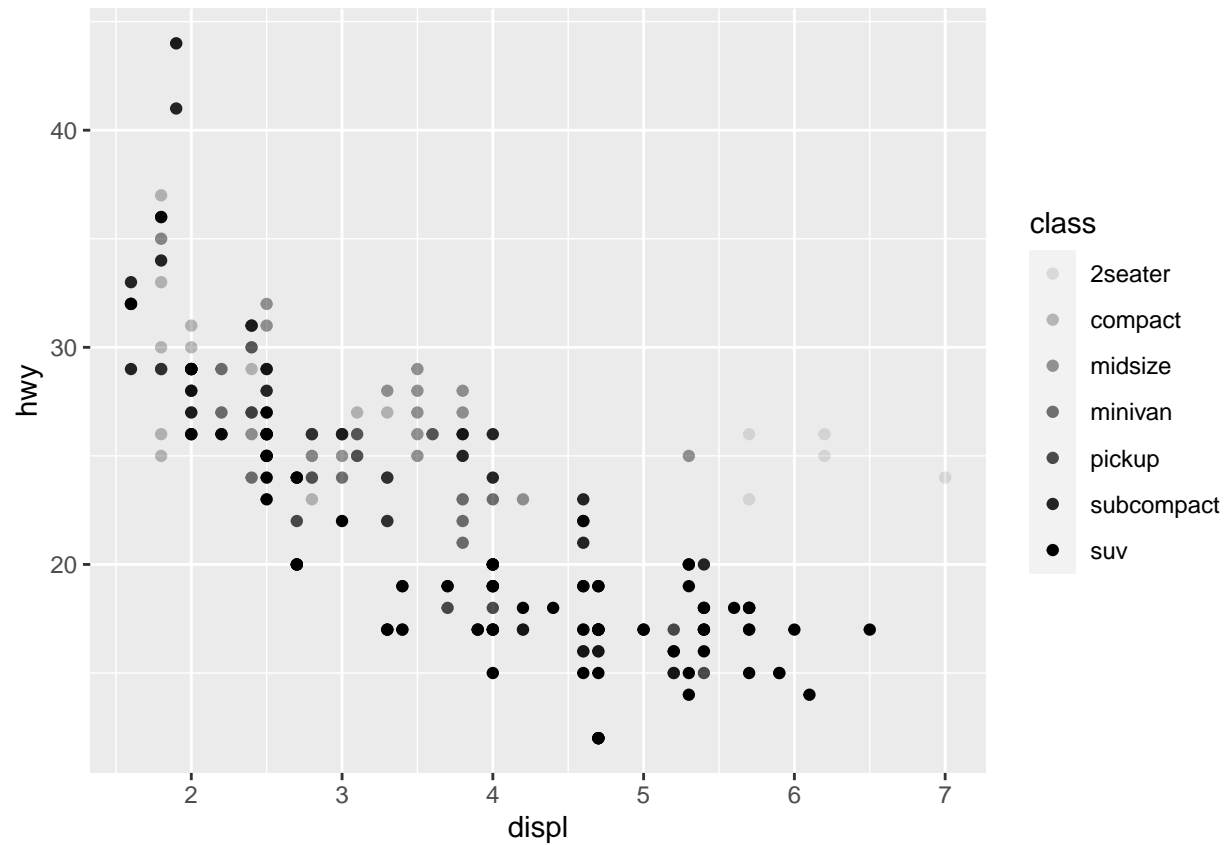
```
# scatterplot with size as class
mpg %>%
  ggplot(aes(displ, hwy, size = class)) +
  geom_point()
```

```
## Warning: Using size for a discrete variable is not advised.
```

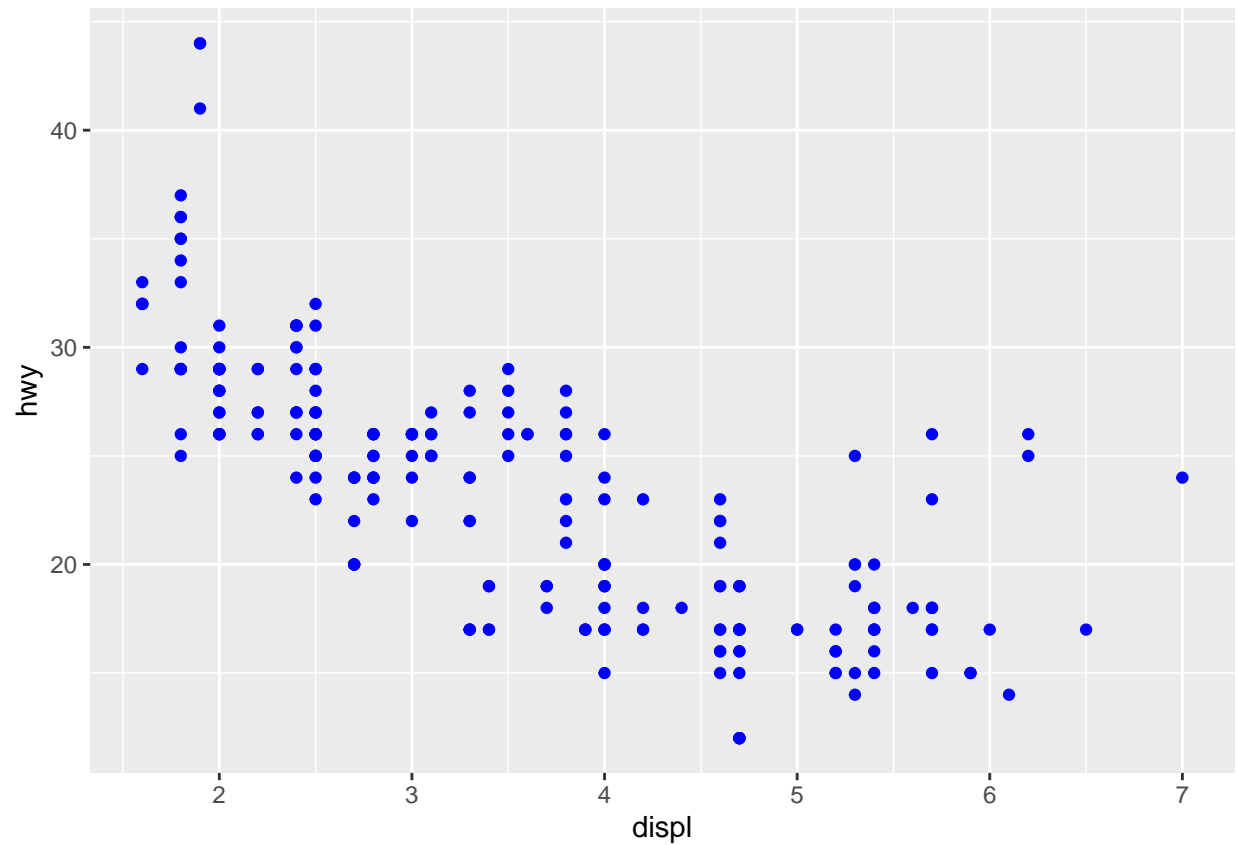


```
# scatterplot with shading as class (alpha)
mpg %>%
  ggplot(aes(displ, hwy, alpha = class)) +
  geom_point()
```

```
## Warning: Using alpha for a discrete variable is not advised.
```



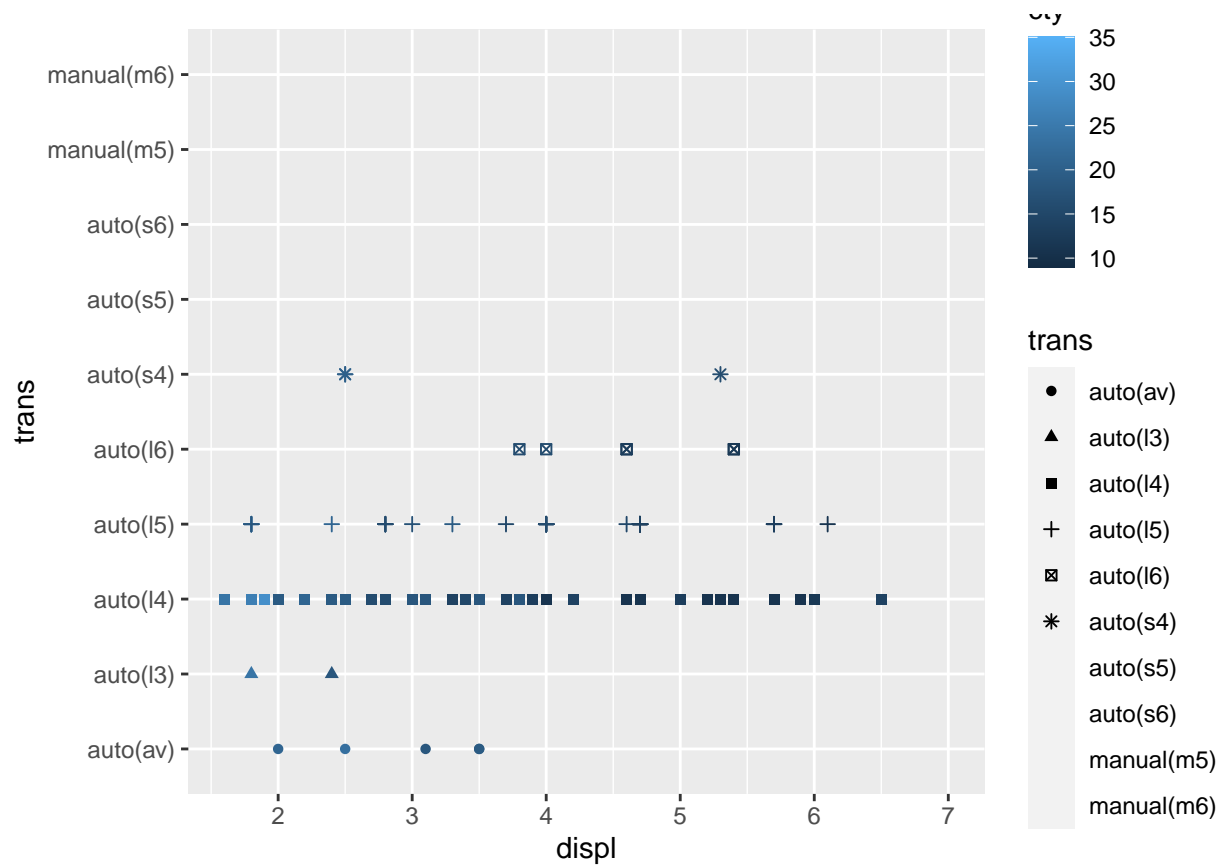
```
# you can specify the color  
mpg %>%  
  ggplot(aes(displ, hwy)) +  
  geom_point(color = "blue")
```



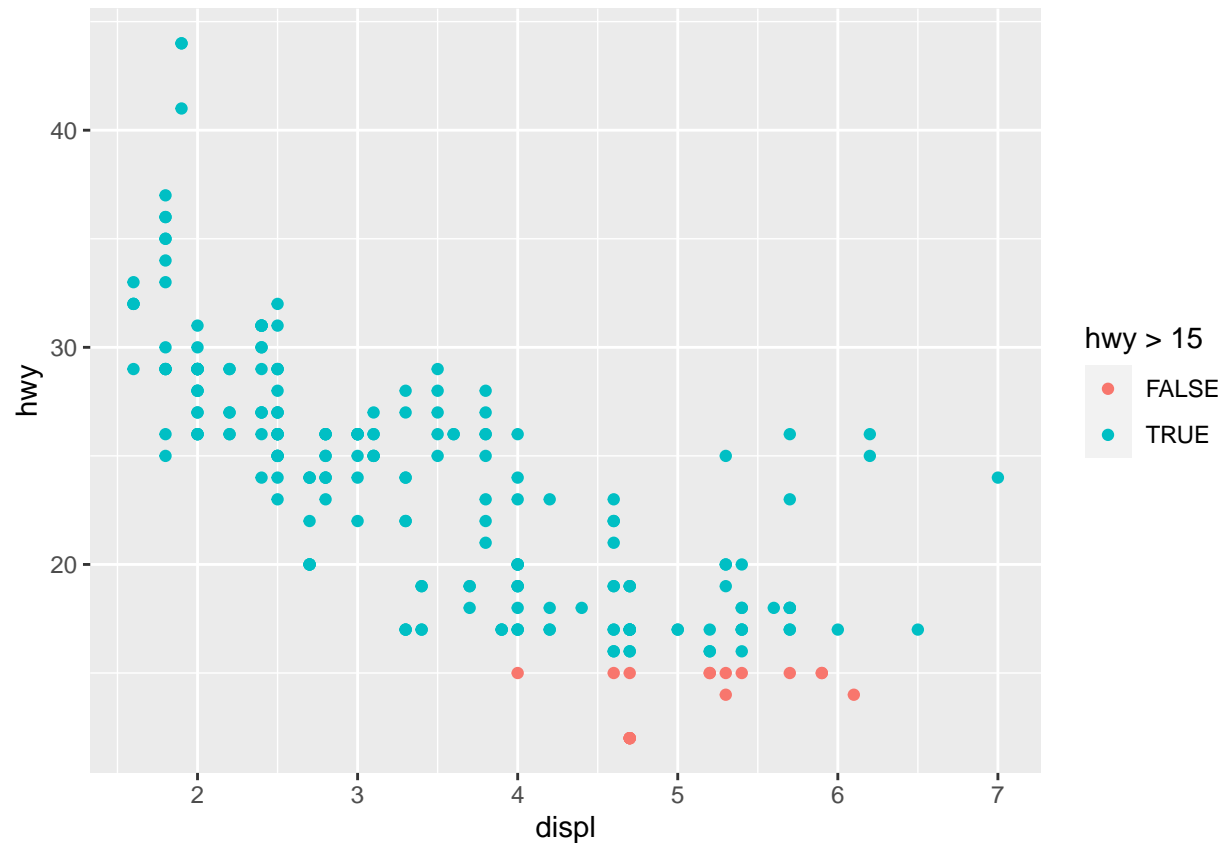
```
mpg %>%
  ggplot(aes(displ, trans, color = cty, shape = trans)) +
  geom_point()
```

```
## Warning: The shape palette can deal with a maximum of 6 discrete values because
## more than 6 becomes difficult to discriminate; you have 10. Consider
## specifying shapes manually if you must have them.
```

```
## Warning: Removed 96 rows containing missing values (geom_point).
```



```
# this is cool
mpg %>%
  ggplot(aes(displ, hwy, color = hwy > 15)) +
  geom_point()
```



3.3 exercises

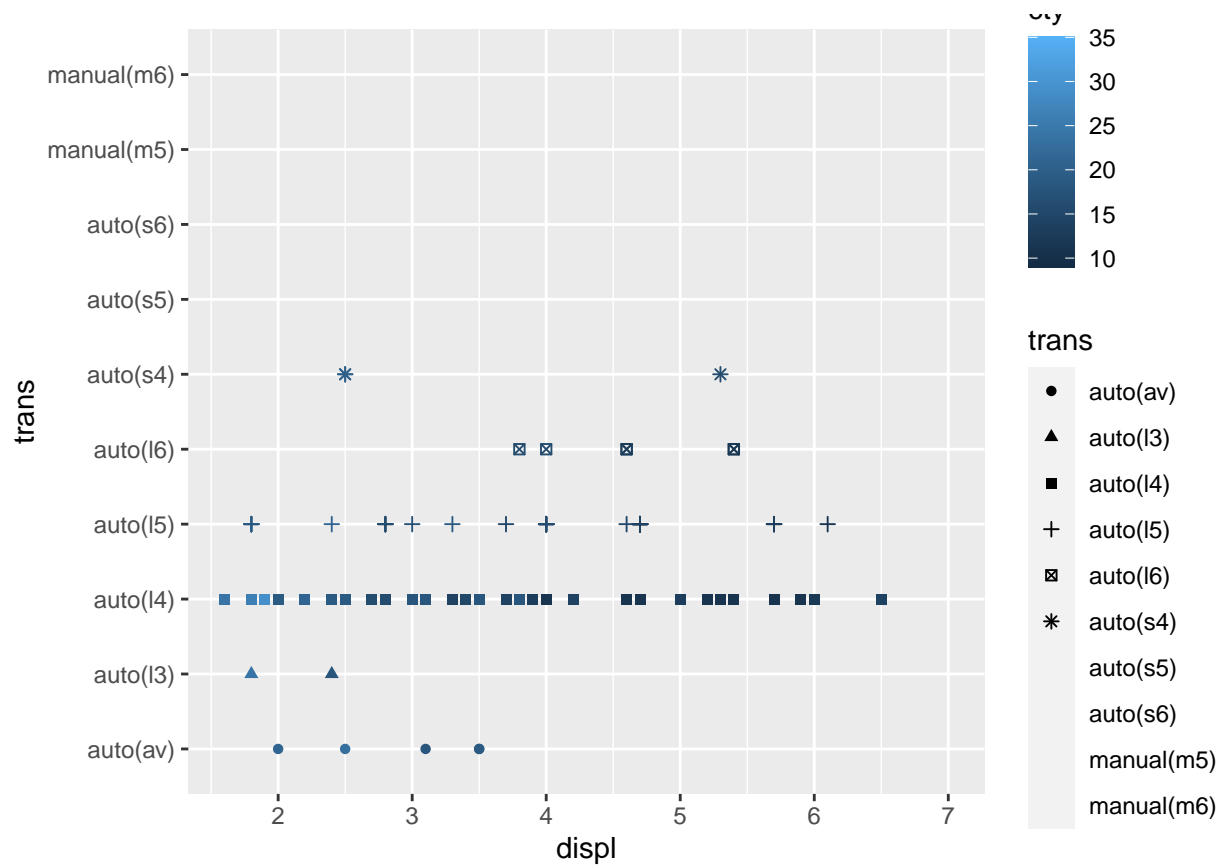
?mpg

mpg %>%

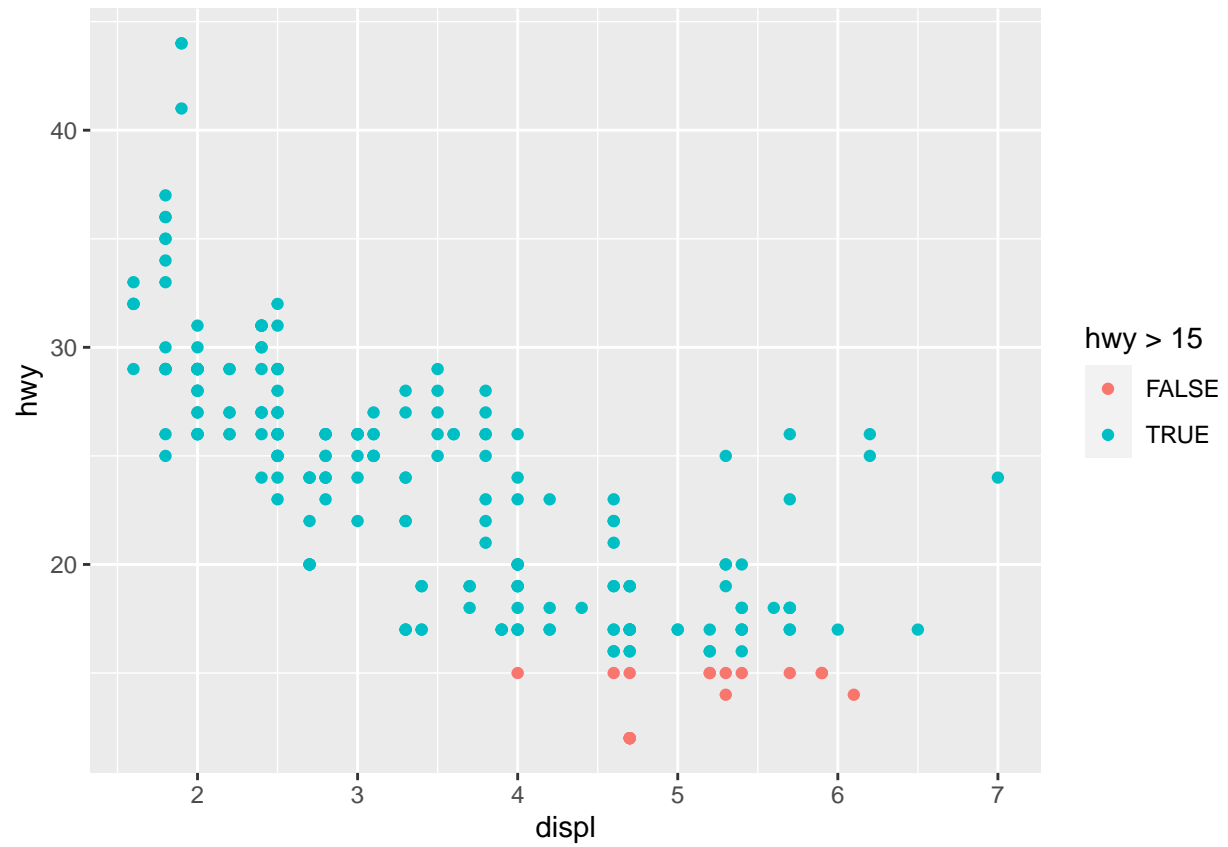
```
ggplot(aes(displ, trans, color = cty, shape = trans)) +  
geom_point()
```

Warning: The shape palette can deal with a maximum of 6 discrete values because
more than 6 becomes difficult to discriminate; you have 10. Consider
specifying shapes manually if you must have them.

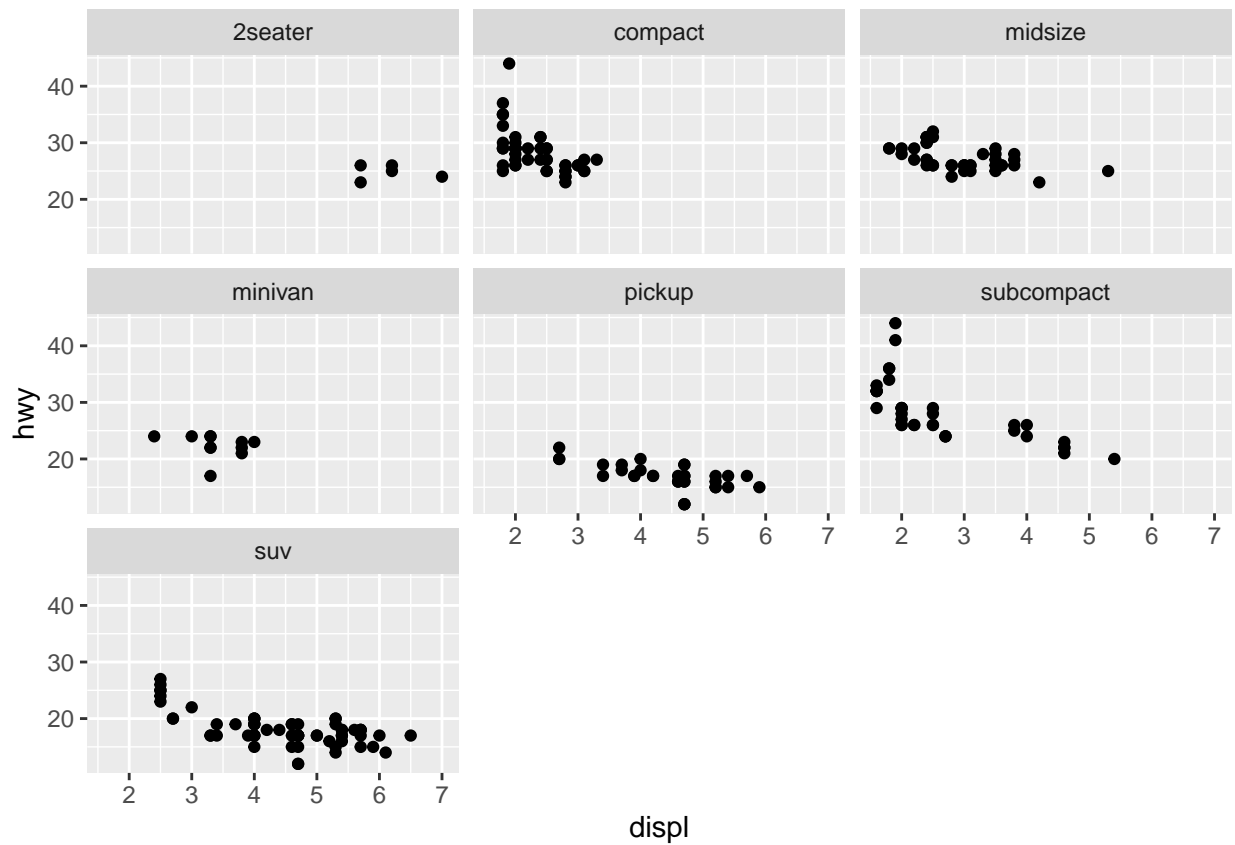
Warning: Removed 96 rows containing missing values (geom_point).



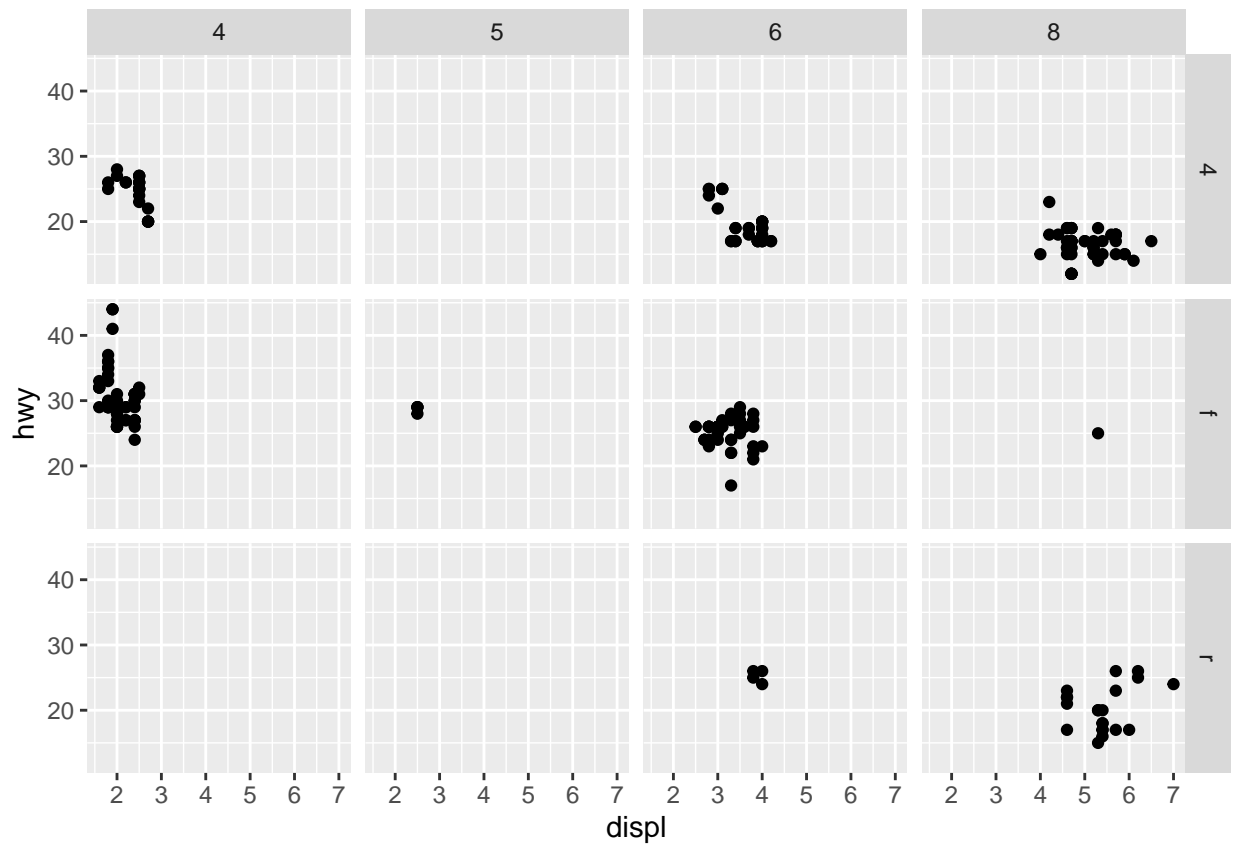
```
# this is cool
mpg %>%
  ggplot(aes(displ, hwy, color = hwy > 15)) +
  geom_point()
```



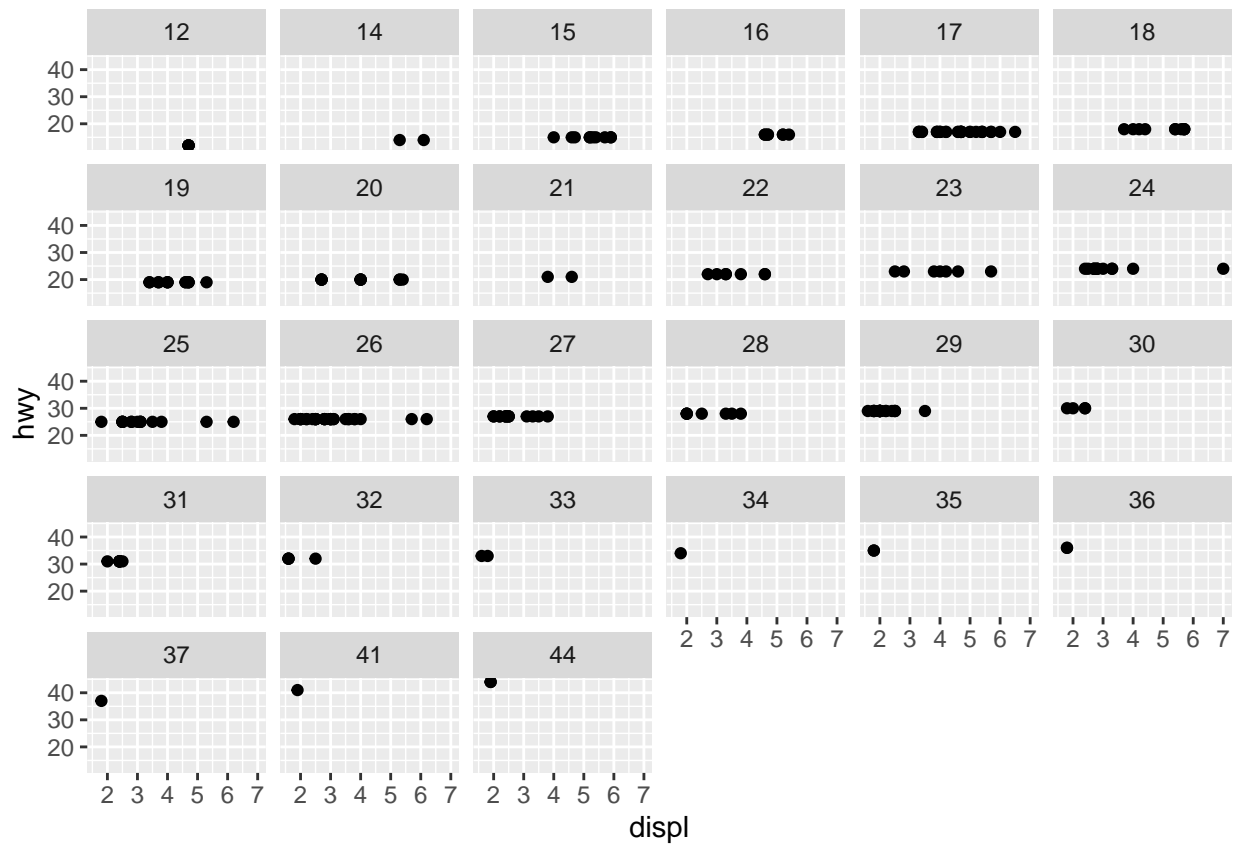
```
# using facet wrap  
mpg %>%  
  ggplot(aes(displ, hwy)) +  
  geom_point() +  
  facet_wrap(~class)
```



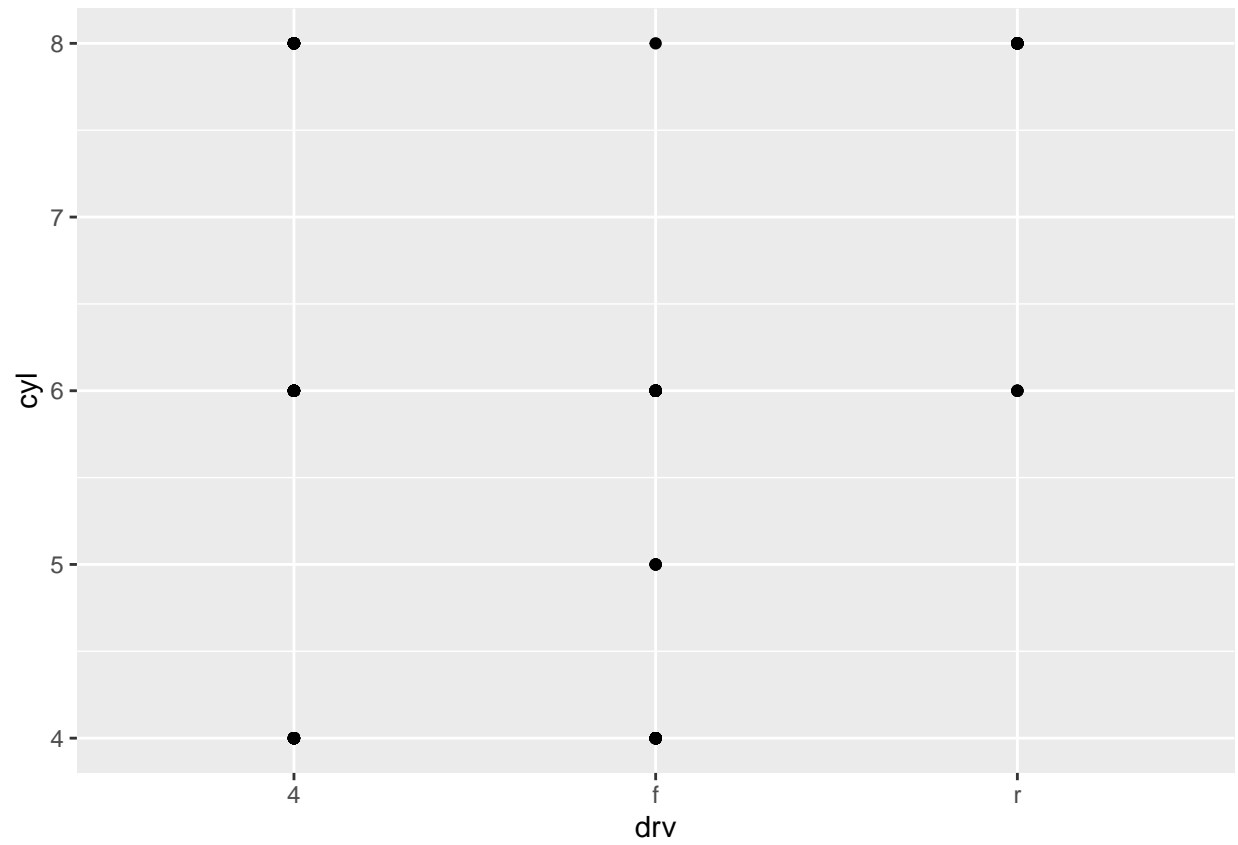
```
# can facet by multiple things using facet grid
mpg %>%
  ggplot(aes(displ, hwy)) +
  geom_point() +
  facet_grid(drv ~ cyl)
```



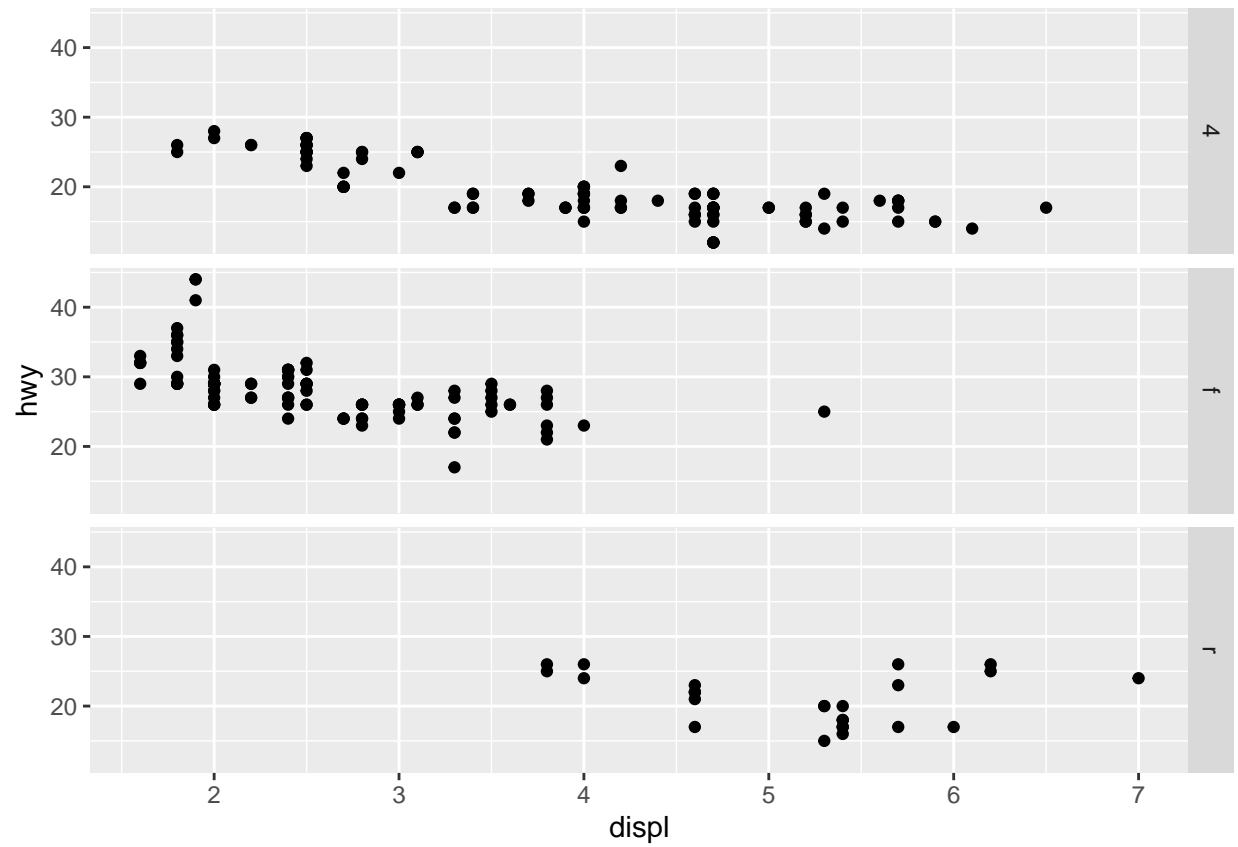
```
# facet on a continuous variable
ggplot(data = mpg) +
  geom_point(mapping = aes(x = displ, y = hwy)) +
  facet_wrap(~hwy)
```



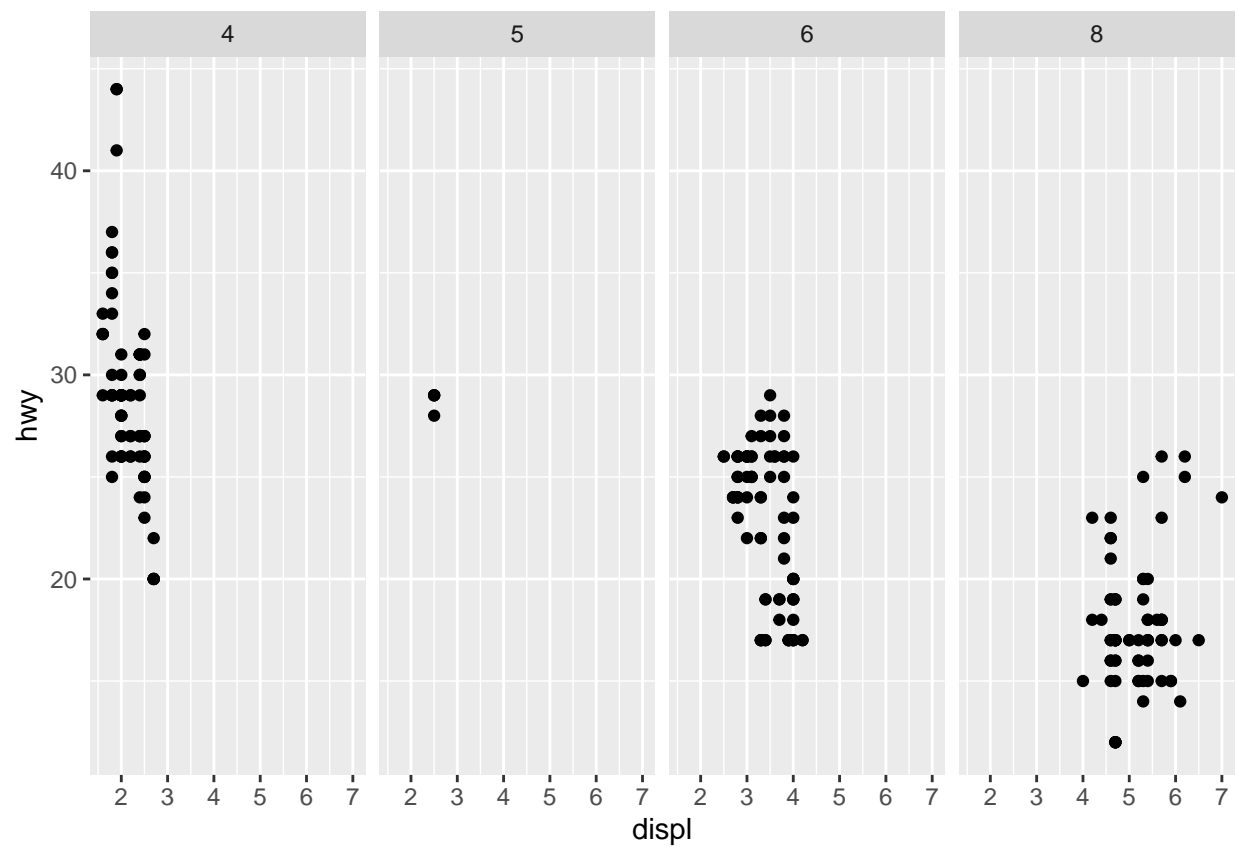
```
ggplot(data = mpg) +  
  geom_point(mapping = aes(x = drv, y = cyl))
```



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



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



```
ggplot(data = mpg) +  
  geom_point(mapping = aes(x = displ, y = hwy)) +  
  facet_wrap(~ class, nrow = 2)
```