Lecture Assignment 4

Taiki Yamashita

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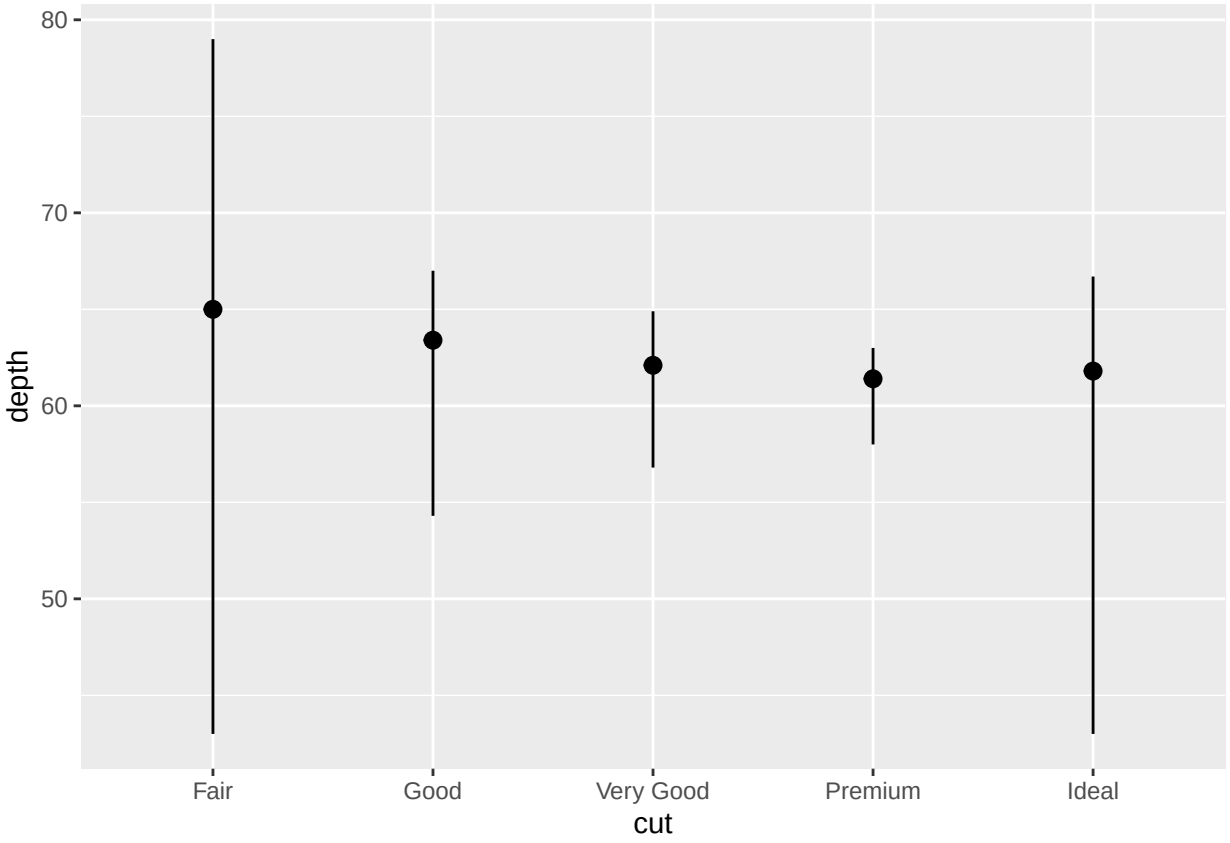
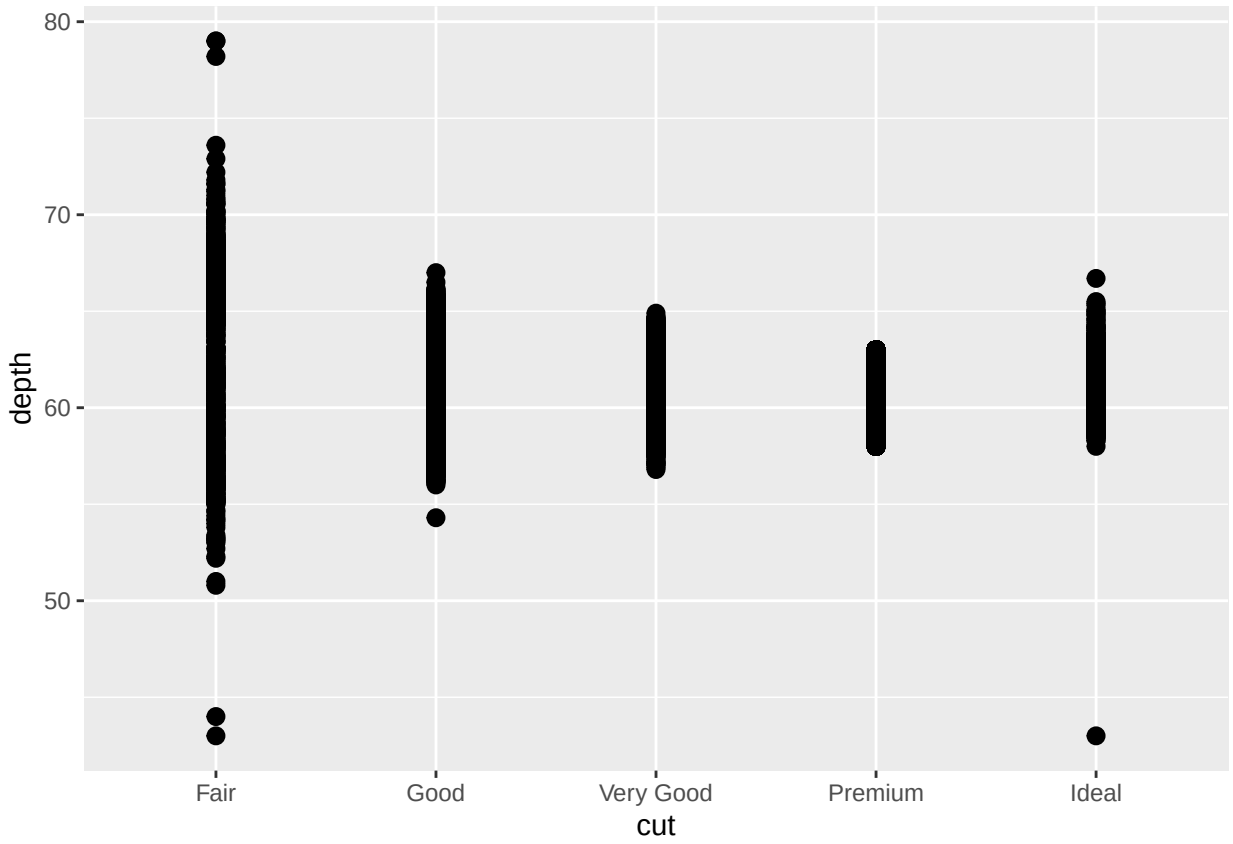
3.7.1 Exercises

1)



stat_summary is associated with geom_pointrange.

```
ggplot(diamonds) +
  geom_pointrange(aes(cut, depth, min = depth, max = depth))
```

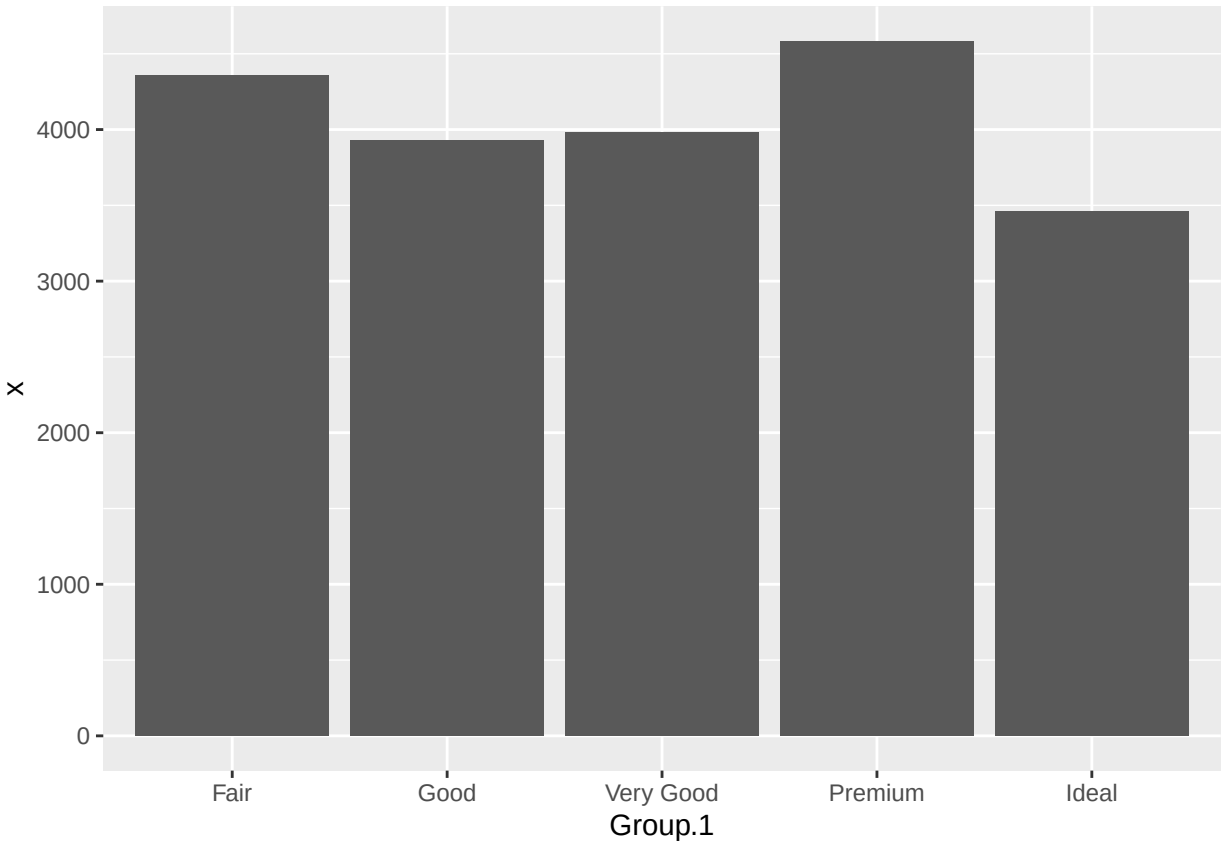


2)

geom_col leaves the data as it is. geom_bar() creates two variables which are count and prop, and then graphs the count data on the y-axis. With geom_col, you can plot the values of any x variable against any y variable.

```
# An example of this would be plotting exactly x to y values.
aggregate.data.frame(diamonds$price, list(diamonds$cut), mean, na.rm = T) %>%
  print(.) %>%
  ggplot(aes(Group.1, x)) +
  geom_col()
```

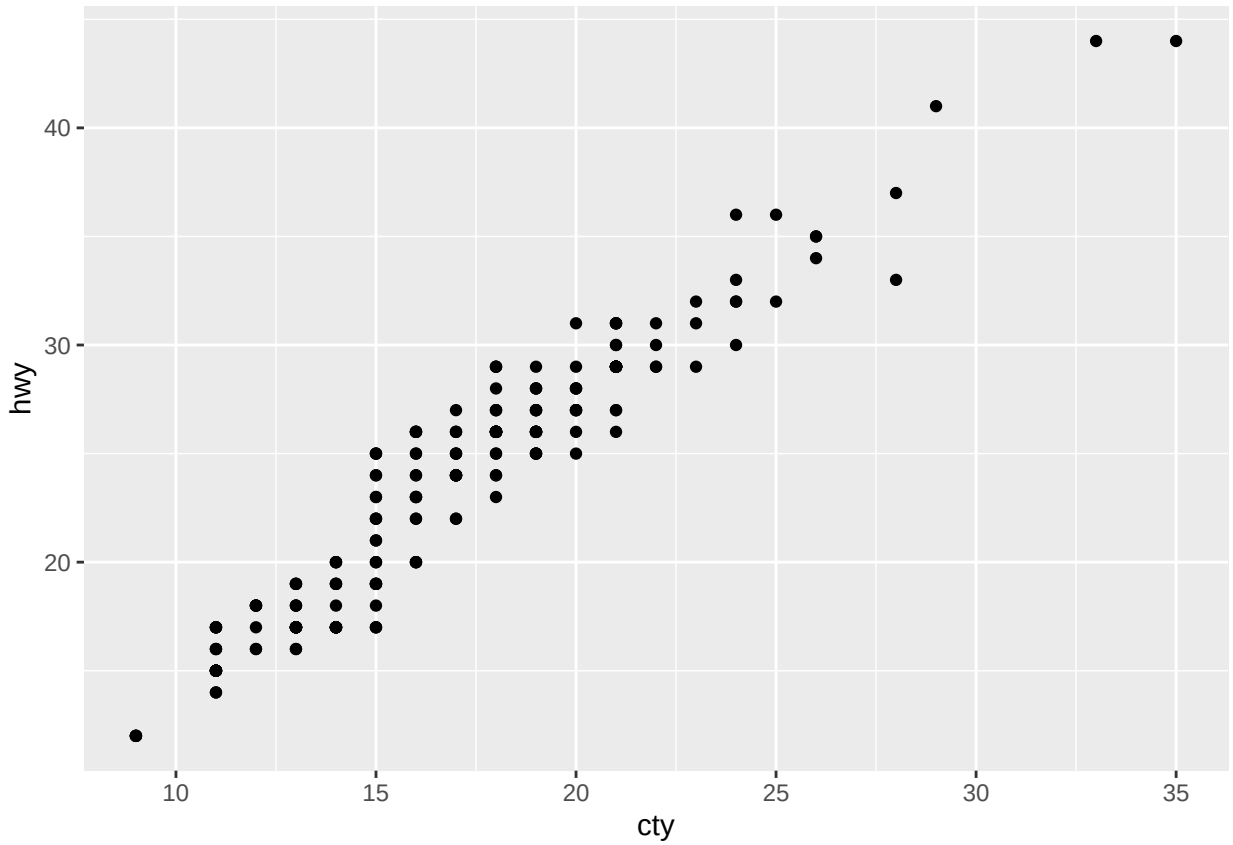
```
##     Group.1        x
## 1      Fair 4358.758
## 2      Good 3928.864
## 3 Very Good 3981.760
## 4   Premium 4584.258
## 5     Ideal 3457.542
```



3.8.1 Exercises

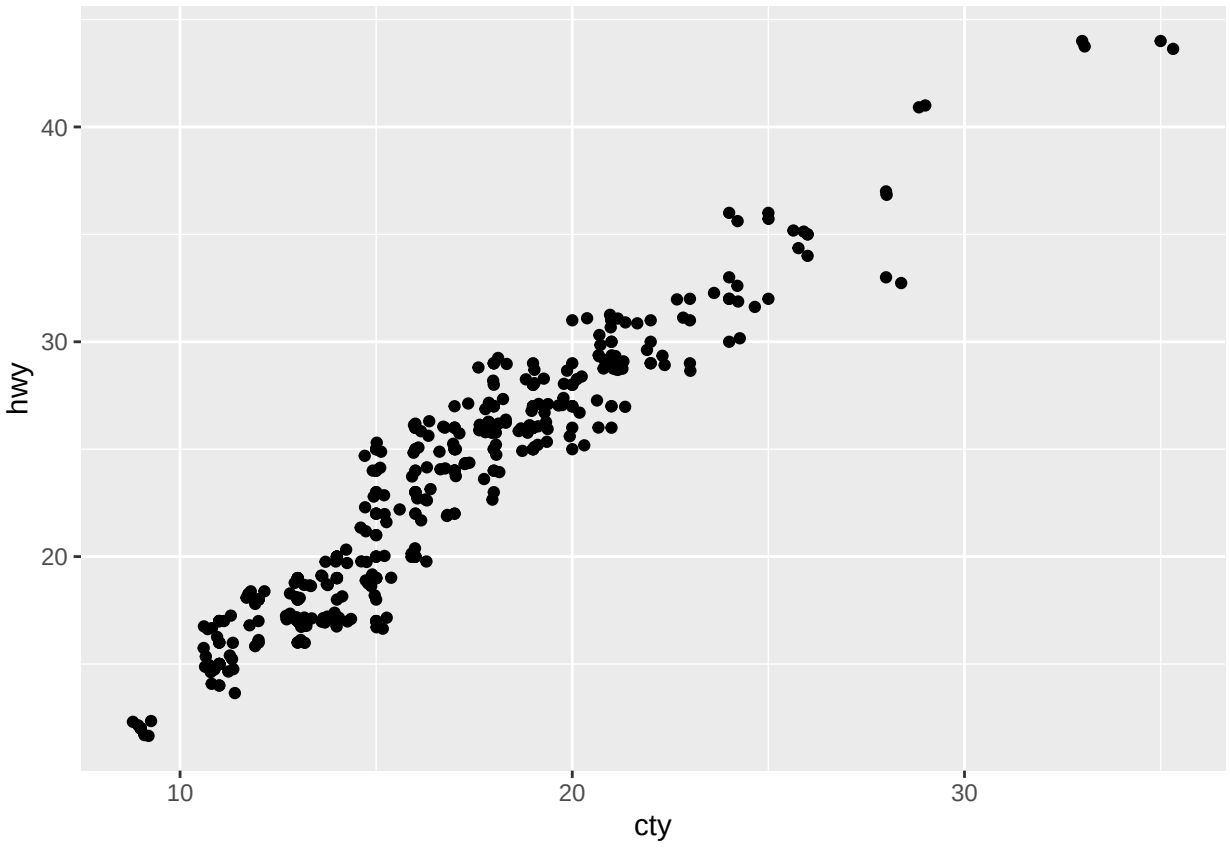
1)

```
# This is the orignal plot given...
ggplot(data = mpg, mapping = aes(x = cty, y = hwy)) +
  geom_point()
```



Although the 2 variables are continous, the chance of being in a single point is very discrete. On top of that, a lot of the points overlap. What we could do to fix this is to add a jitter.

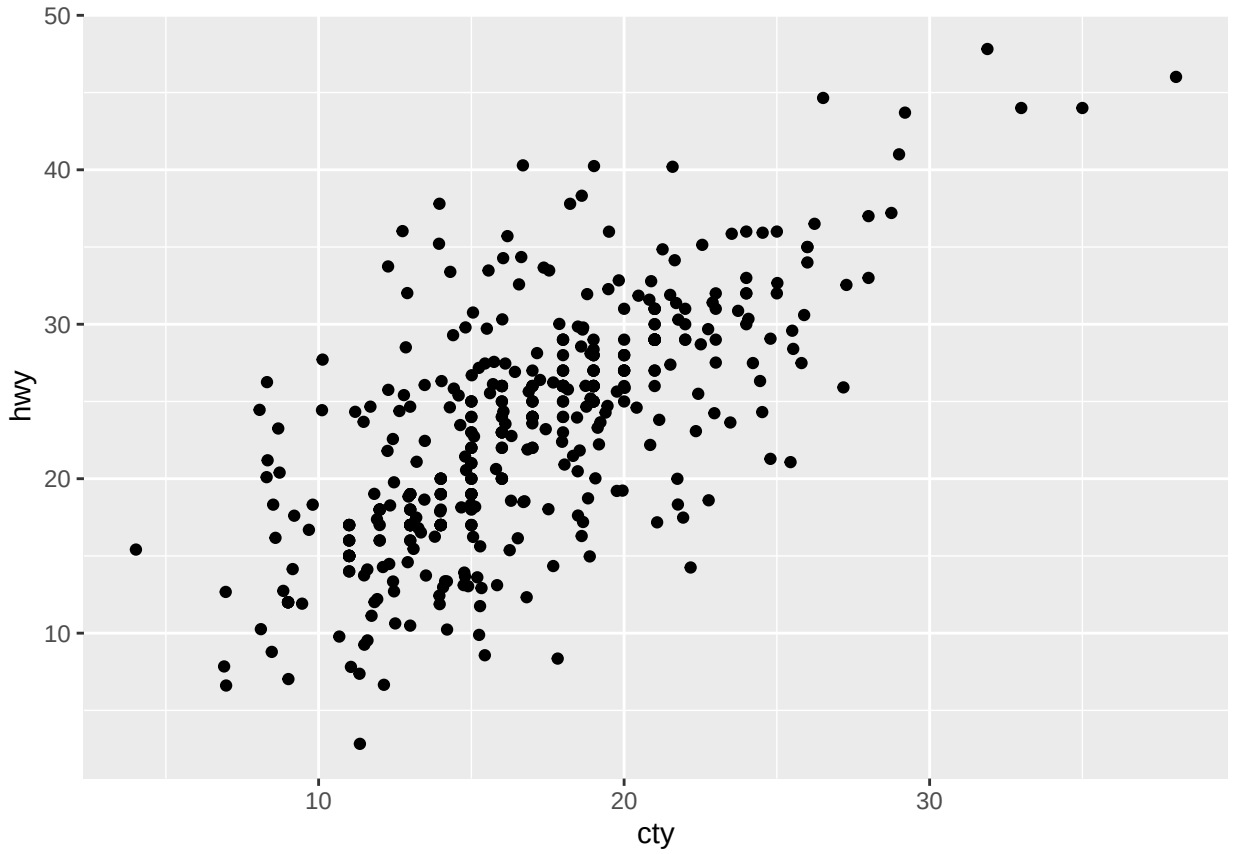
```
ggplot(data = mpg, mapping = aes(x = cty, y = hwy)) +
  geom_point() +
  geom_jitter()
```



2)

The width and height control the amount of jittering.

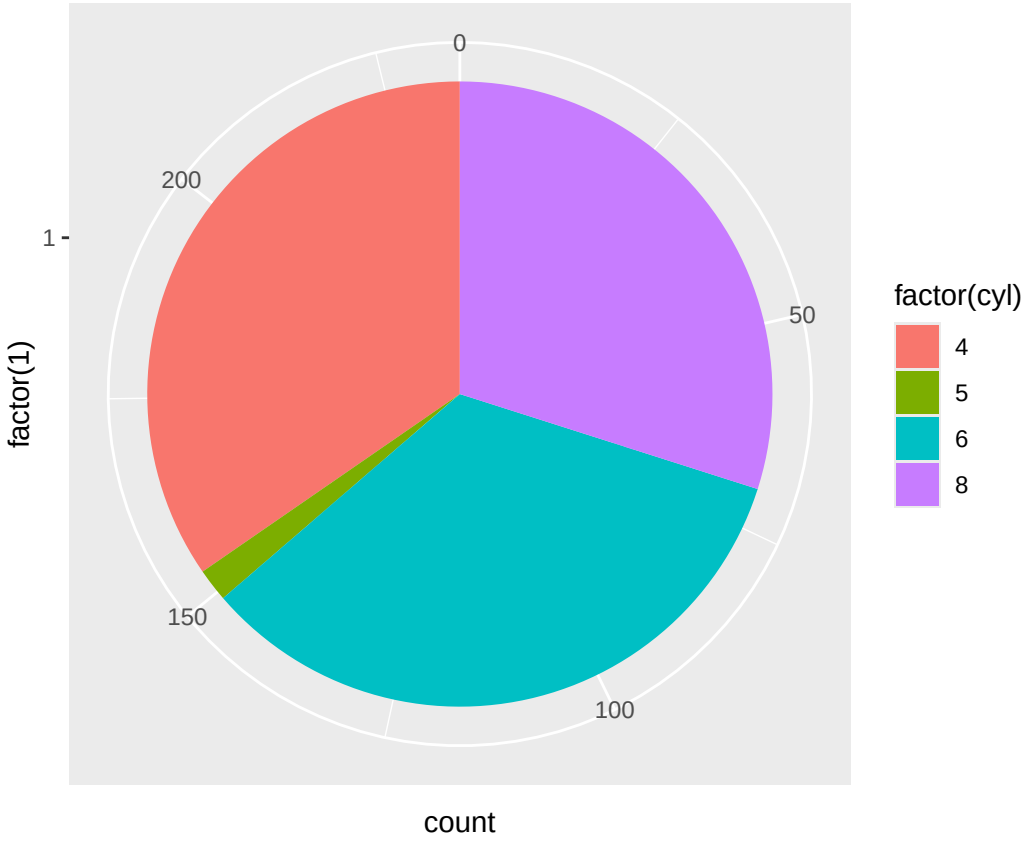
```
# To control the amount of jittering, you could add the width and the height.
ggplot(data = mpg, mapping = aes(x = cty, y = hwy)) +
  geom_point() +
  geom_jitter(width = 5, height = 10)
```



3.9.1 Exercises

1)

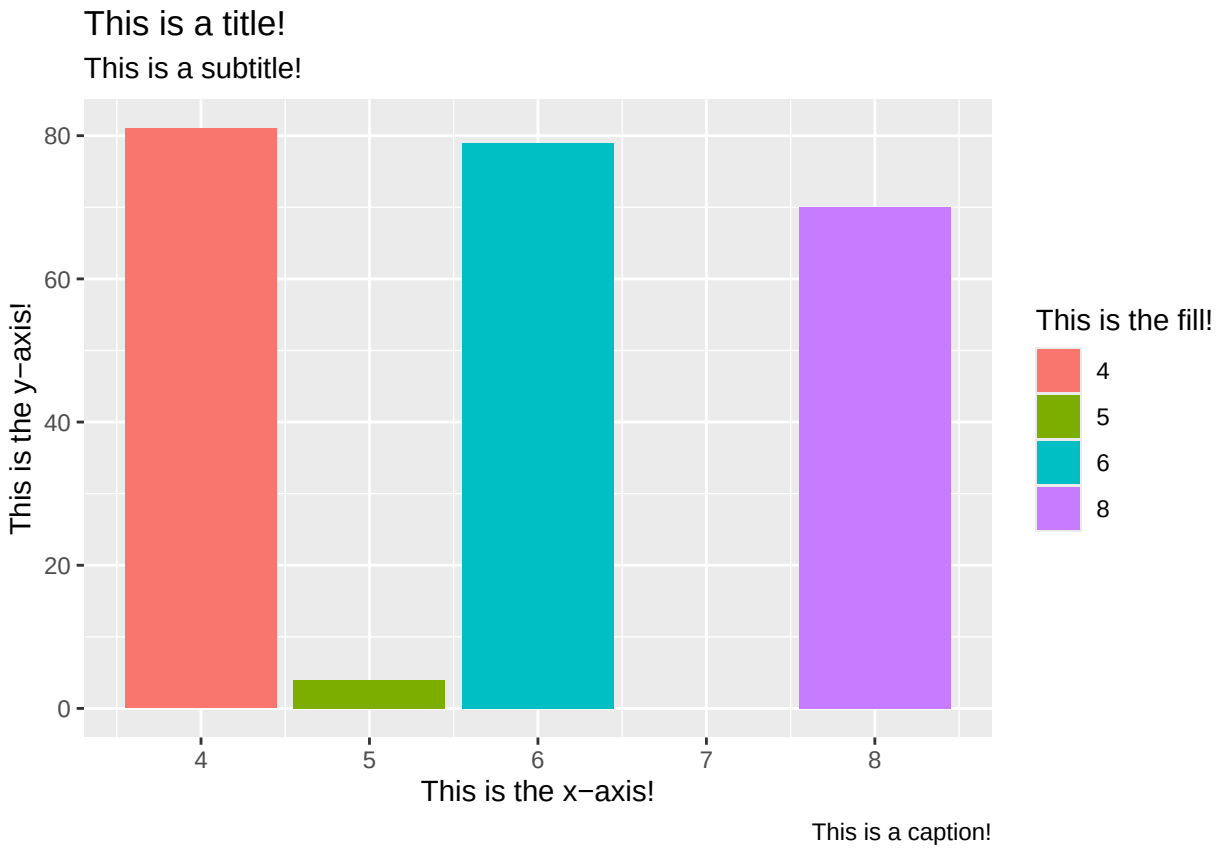
```
ggplot(mpg, aes(factor(1), fill = factor(cyl))) +
  geom_bar(width = 1) +
  coord_polar(theta = 'y')
```



2)

What labs() would allow you to do is to control all the labels in the plot. An example of this would be...

```
ggplot(mpg, aes(cyl, fill = as.factor(cyl))) +
    geom_bar() +
    labs(title = "This is a title!",
         subtitle = "This is a subtitle!",
         x = "This is the x-axis!",
         y = "This is the y-axis!",
         fill = "This is the fill!",
         caption = "This is a caption!")
```


This is a title!
This is a subtitle!
This is the y−axis!
80
60
40
20
0
4
5
6
7
8
This is the x−axis!
This is a caption!
This is the fill!
4
5
6
8