PSTAT 10 Worksheet 9

Setup

```
setwd('G:/Documents/School/2023-2024/Summer 2024/PSTAT 10/PSTAT10-Worksheets-and-HW')
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.1     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## v purrr     1.0.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
hibbs <- as_tibble(read.csv("hibbs.dat", sep=" "))
```

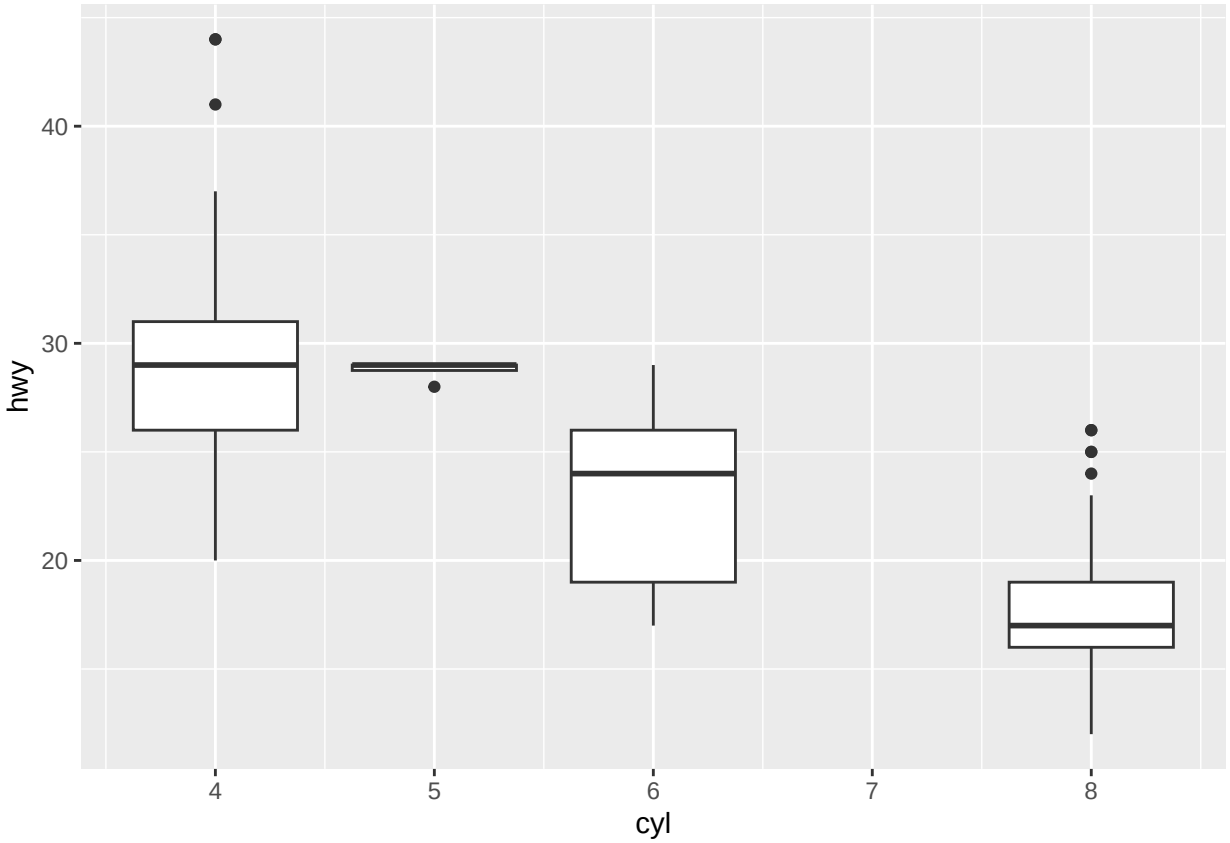
Problem 1

```
plot <- ggplot(hibbs, mapping = aes(x = growth, y = vote))
plot + geom_smooth(method='lm', se= FALSE, col="red") +
       geom_hline(yintercept=50, col="gray") +
       geom_point() +
       ggrepel::geom_text_repel(data=NULL, mapping = aes(x = growth, y = vote, label=year)) +
       guides(fill = "none") +
       labs(x = "Avg. recent growth in personal income", y = "Incumbent party's vote share",
            title = "Bread and Peace",subtitle = "Forecasting the election from the economy",
            caption= "Source: Douglas Hibbs") +
       scale_x_continuous(breaks=c(0,1,2,3,4), labels=c('0%','1%','2%','3%','4%')) +
       scale_y_continuous(breaks=c(45,50,55,60), labels=c('45%','50%','55%','60%')) +
       theme_classic()
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

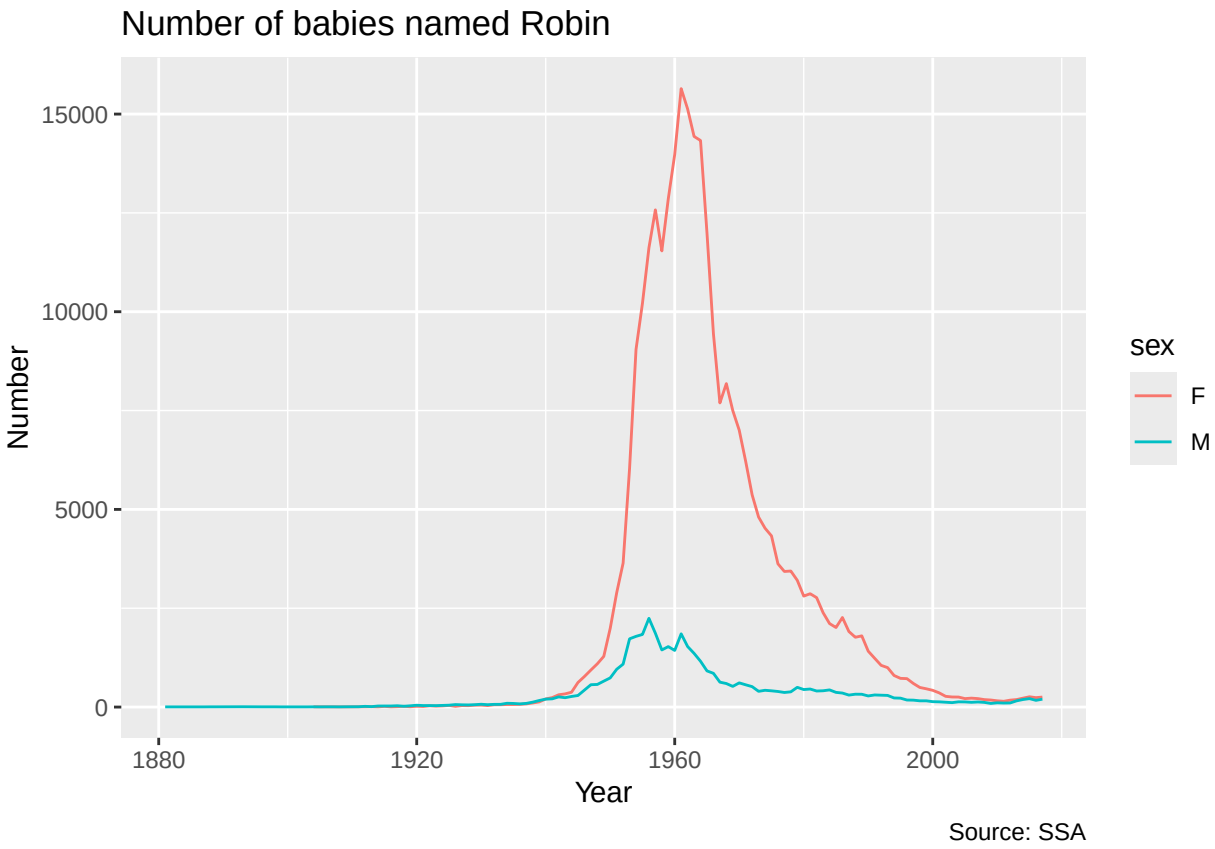
Problem 2

```
p <- ggplot(mpg, mapping = aes(x = cyl, y = hwy))
p + geom_boxplot(mapping=aes(group=cyl))
```



Problem 3

```
library(babynames)
robin <- filter(babynames, name == "Robin")
robin_plot <- ggplot(robin, mapping = aes(x = year, y = n, color=sex))
robin_plot + geom_line() +
             guides(fill = "Sex") +
             labs(x = "Year", y = "Number", title = "Number of babies named Robin", caption = "Source: S
```


Number of babies named Robin
15000
10000
5000
0
Number
1880
1920
1960
2000
Year
sex
F
M
Source: SSA