ggplot2 Exercises

Based on *R Graphics Cookbook* by Winston Chang

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Chapter 1

R Basics

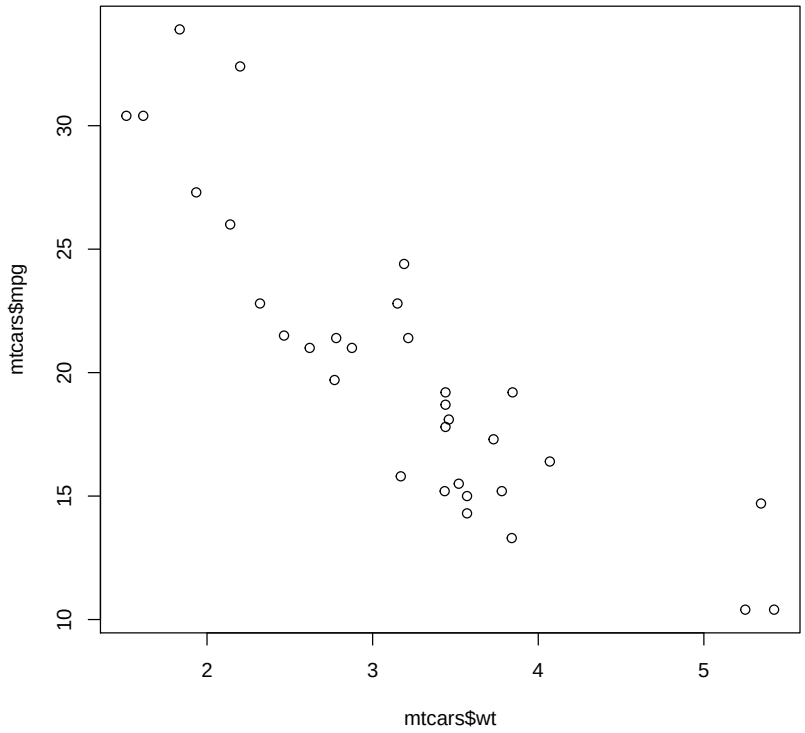
There's not really much to add for this chapter. Move on to the next one.

Chapter 2

Quickly Exploring Data

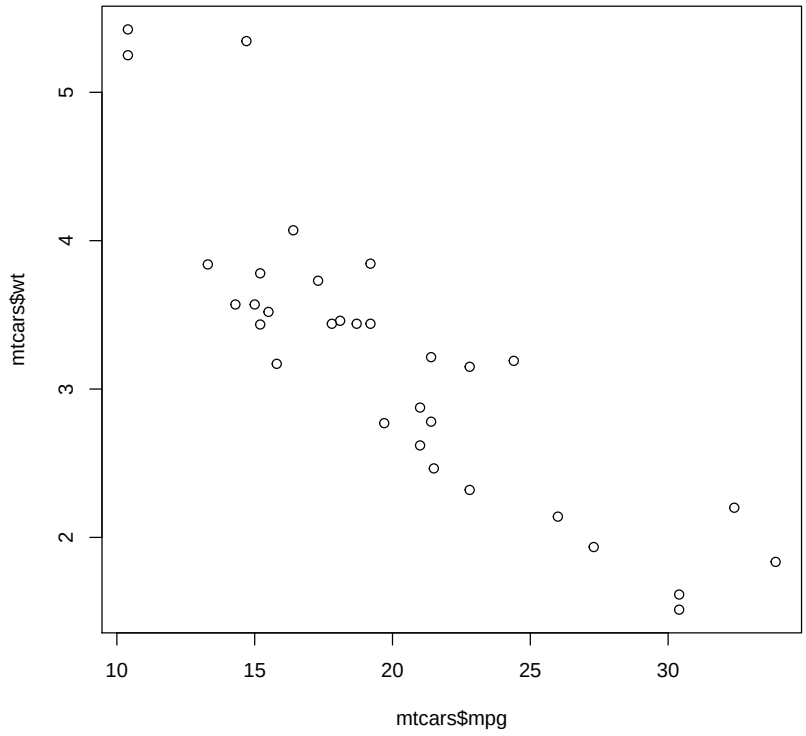
1. Produce the following plot with the `mtcars` dataset. It's built into R so you do not need to load any packages:

```
plot(mtcars$wt, mtcars$mpg)
```



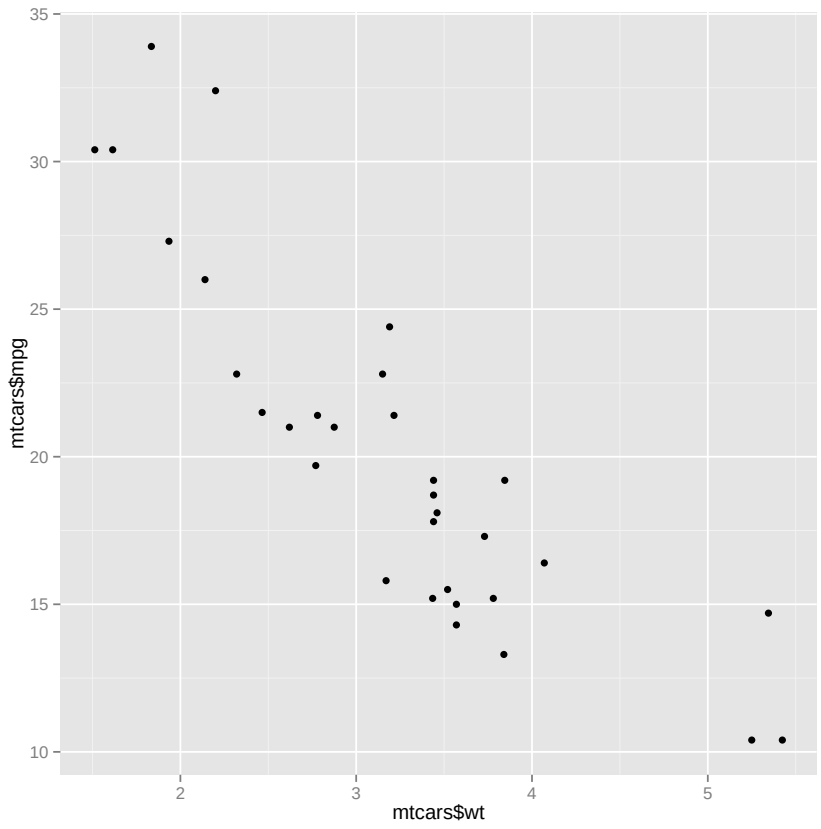
2. Produce the following plot with the `mtcars` dataset. It's built into R so you do not need to load any packages:

```
plot(mtcars$mpg, mtcars$wt)
```



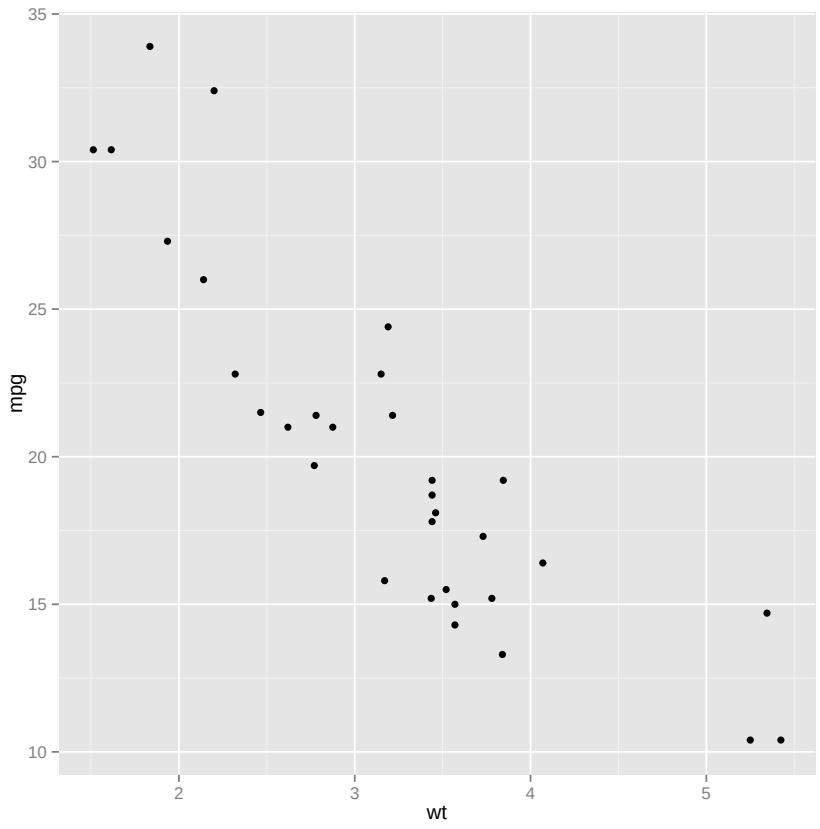
3. Load the ggplot2 package and produce the following plot with the mtcars dataset:

```
library(ggplot2)
qplot(mtcars$wt, mtcars$mpg)
```



4. Load the ggplot2 package and produce the following plot with the mtcars dataset:

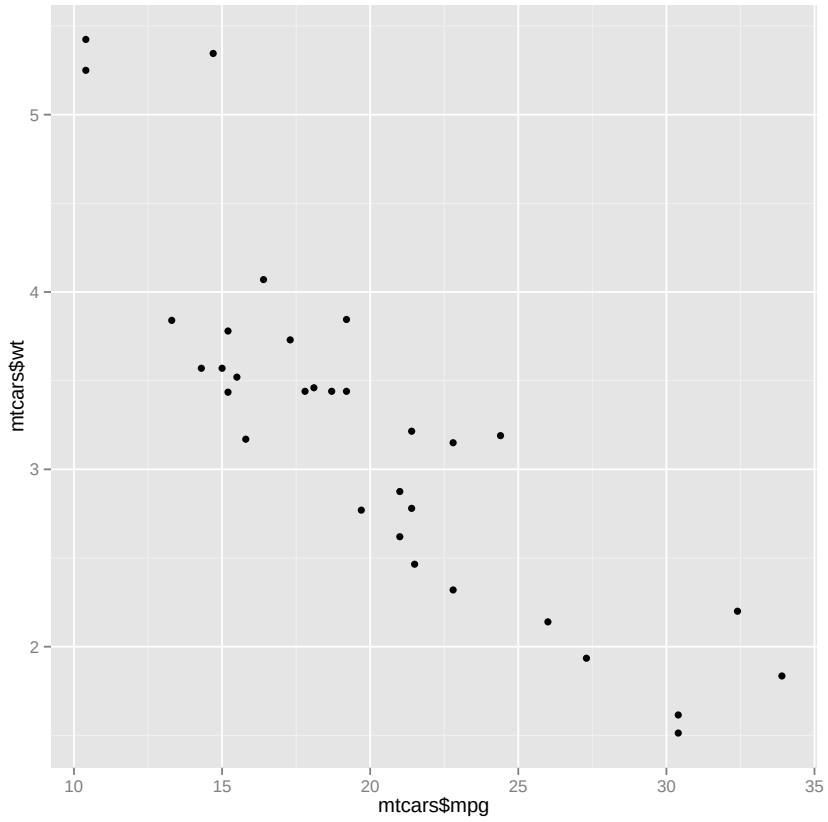
```
library(ggplot2)
qplot(wt, mpg, data = mtcars)
```




```
# Alternative Solution
library(ggplot2)
ggplot(mtcars, aes(x = wt, y = mpg)) + geom_point()
```

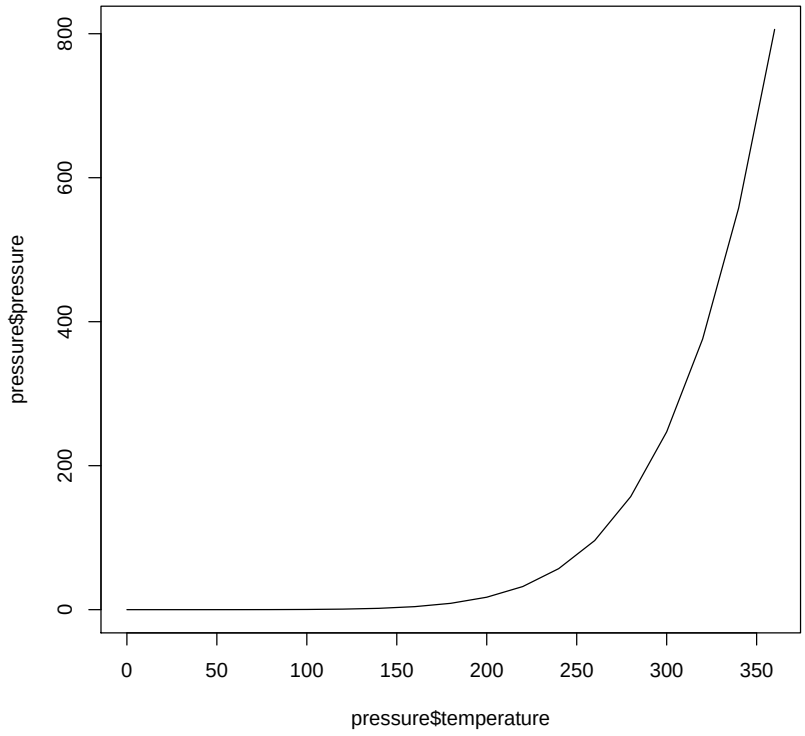
5. Load the ggplot2 package and produce the following plot with the mtcars dataset:

```
library(ggplot2)
qplot(mtcars$mpg, mtcars$wt)
```



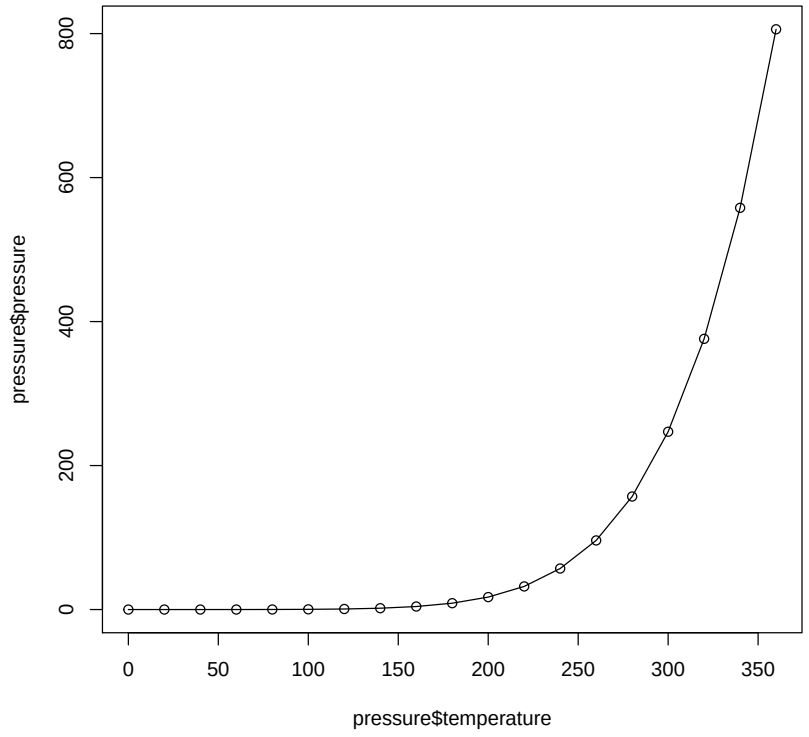
6. Produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages:

```
plot(pressure$temperature, pressure$pressure, type = "l")
```



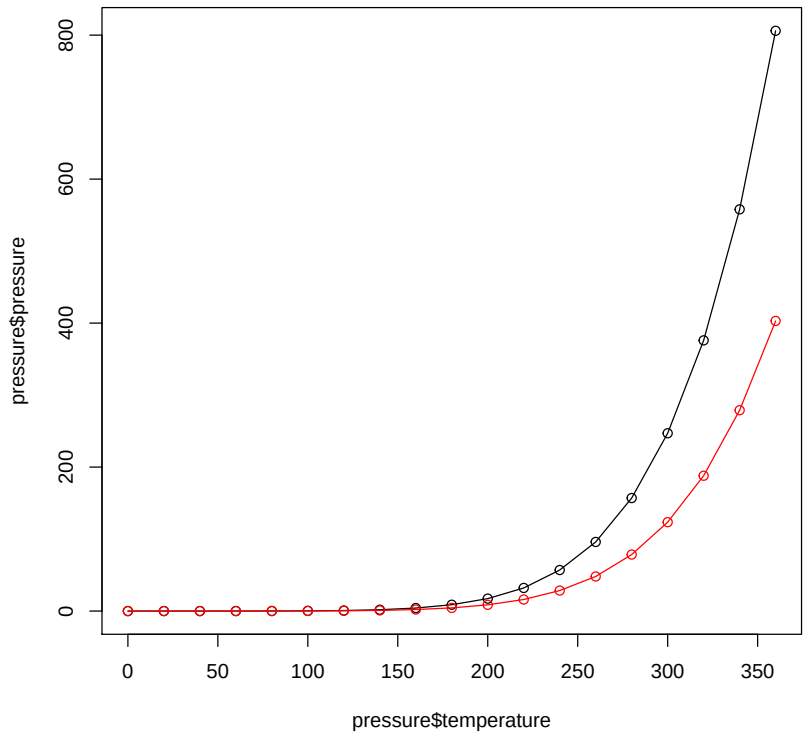
7. Produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages:

```
plot(pressure$temperature, pressure$pressure, type = "l")
points(pressure$temperature, pressure$pressure)
```



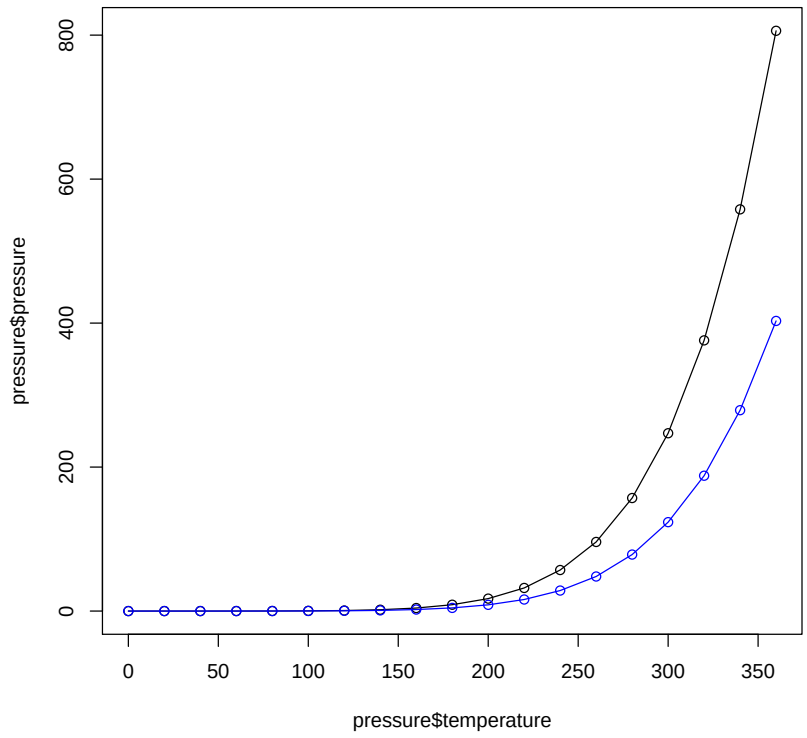
8. Produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages. The height of the red line is one-half of the height of the black line at all points:

```
plot(pressure$temperature, pressure$pressure, type = "l")
points(pressure$temperature, pressure$pressure)

lines(pressure$temperature, pressure$pressure/2, col = "red")
points(pressure$temperature, pressure$pressure/2, col = "red")
```



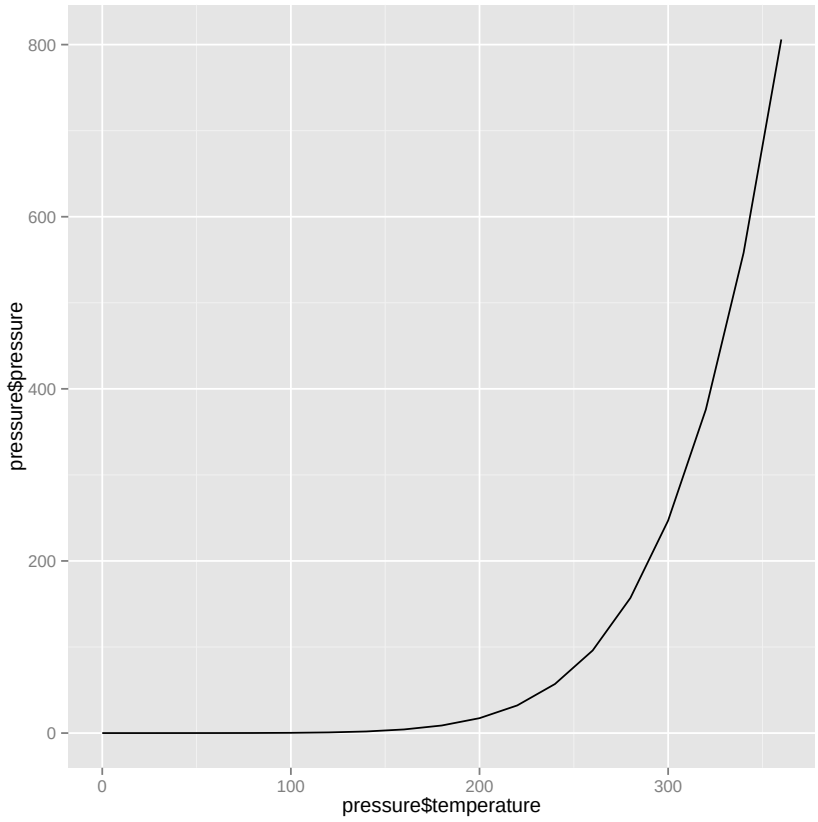
9. Produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages. The height of the blue line is one-half of the height of the black line at all points:

```
plot(pressure$temperature, pressure$pressure, type = "l")
points(pressure$temperature, pressure$pressure)

lines(pressure$temperature, pressure$pressure/2, col = "blue")
points(pressure$temperature, pressure$pressure/2, col = "blue")
```



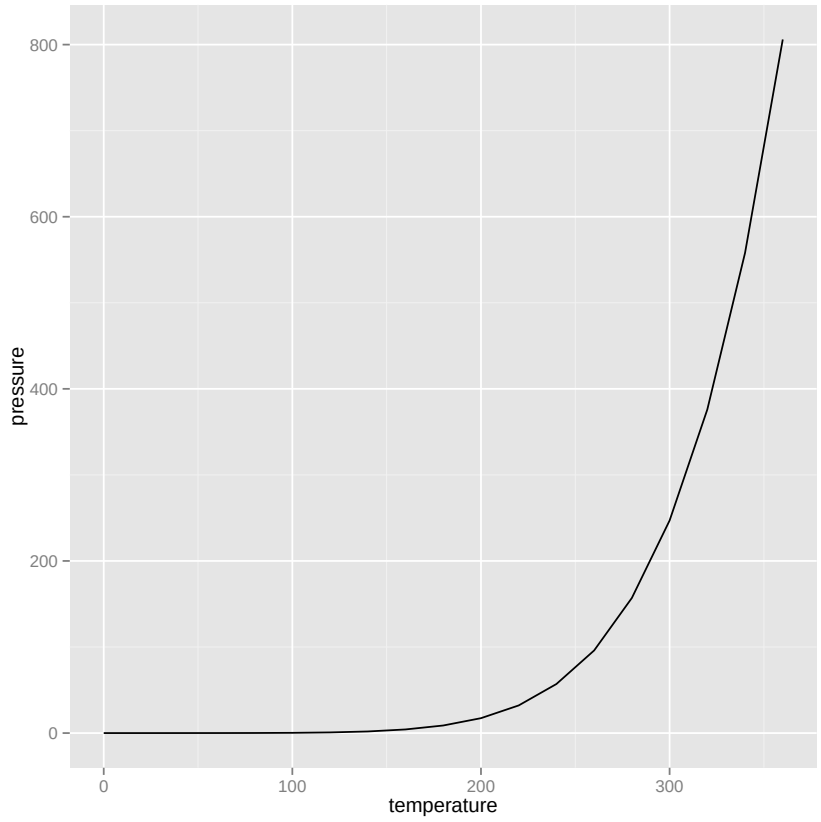
10. Load the ggplot2 package and produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages:

```
library(ggplot2)
qplot(pressure$temperature, pressure$pressure, geom = "line")
```



11. Load the ggplot2 package and produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages:

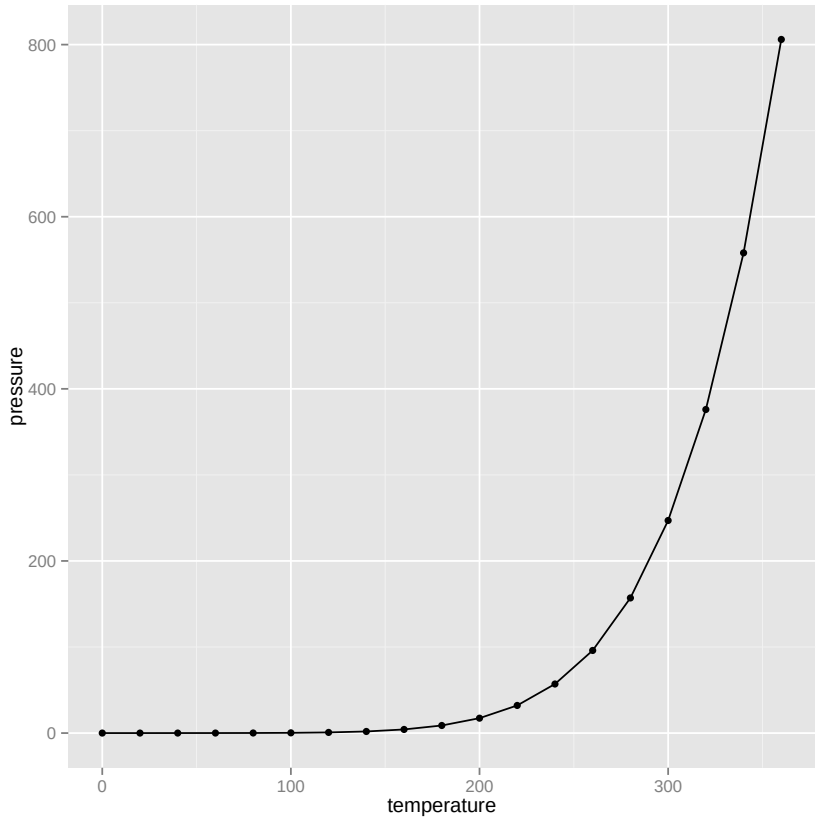
```
library(ggplot2)
qplot(temperature, pressure, data = pressure, geom = "line")
```




```
# Alternative Solution
library(ggplot2)
ggplot(pressure, aes(x = temperature, y = pressure)) + geom_line()
```

12. Load the ggplot2 package and produce the following plot with the pressure dataset. It's built into R so you do not need to load any packages:

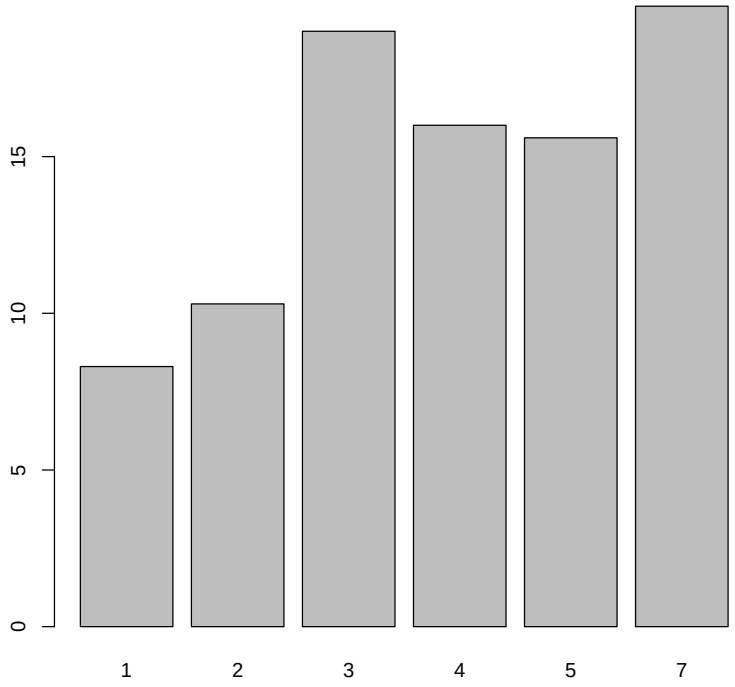
```
library(ggplot2)
qplot(temperature, pressure, data = pressure, geom = c("line", "point"))
```




```
library(ggplot2)
ggplot(pressure, aes(x = temperature, y = pressure)) + geom_line() + geom_point()
```

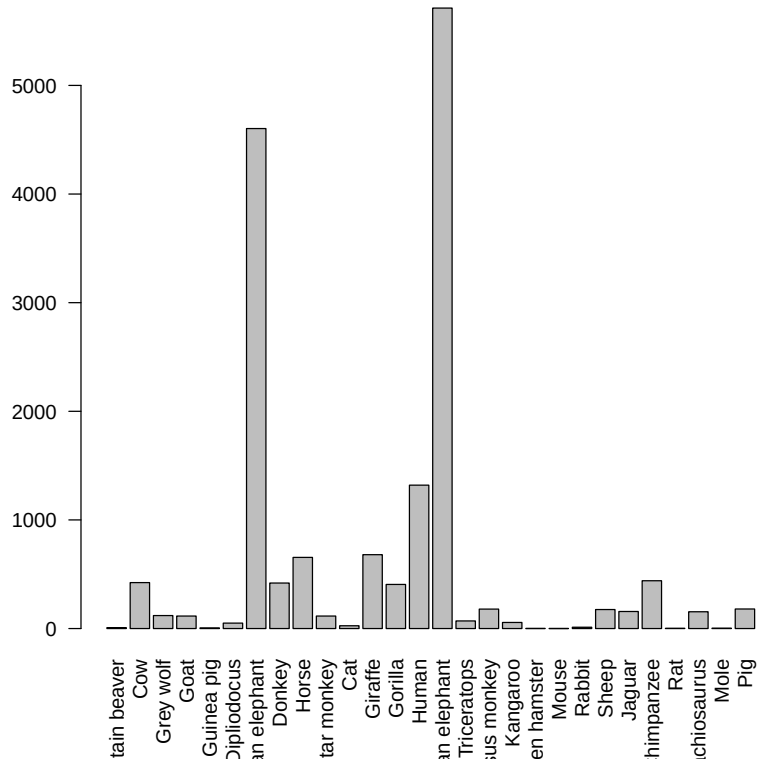
13. Produce the following plot with the `BOD` dataset. It's built into R so you do not need to load any packages:

```
barplot(BOD$demand, names.arg = BOD$Time)
```



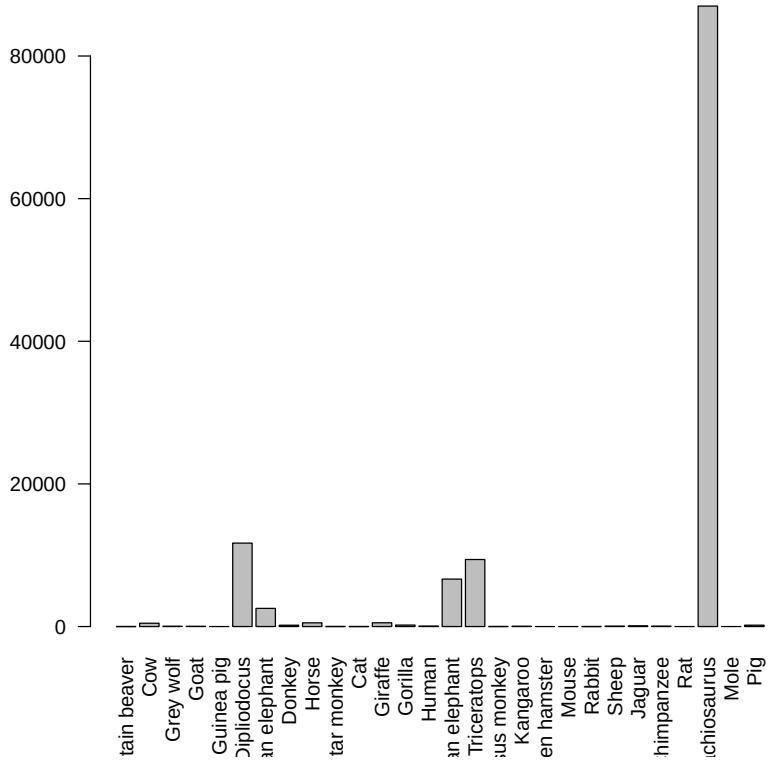
14. Load the MASS package and produce the following plot with the Animals dataset:

```
library(MASS)
barplot(Animals$brain, names.arg = row.names(Animals), las = 2)
```



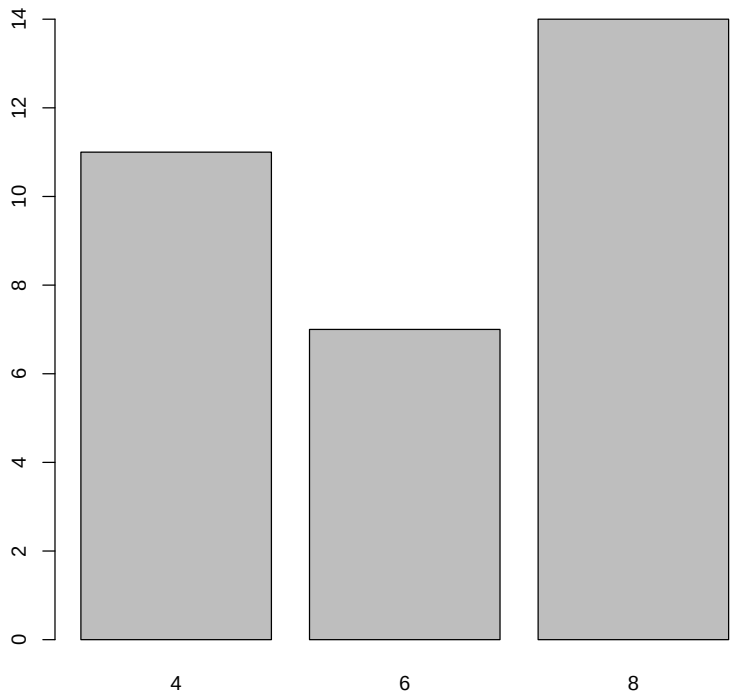
15. Load the MASS package and produce the following plot with the Animals dataset:

```
library(MASS)
barplot(Animals$body, names.arg = row.names(Animals), las = 2)
```



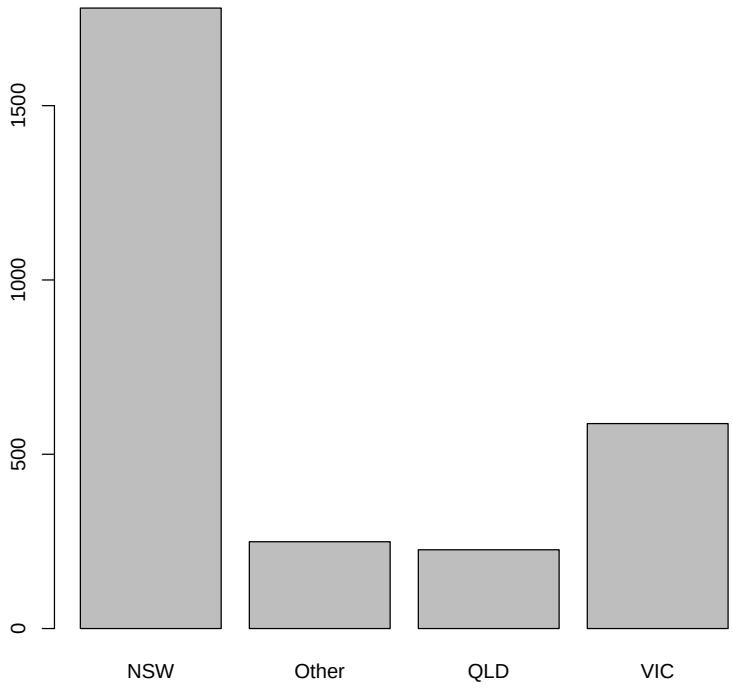
16. Produce the following plot with the `mtcars` dataset. It's built into R so you do not need to load any packages:

```
barplot(table(mtcars$cyl))
```



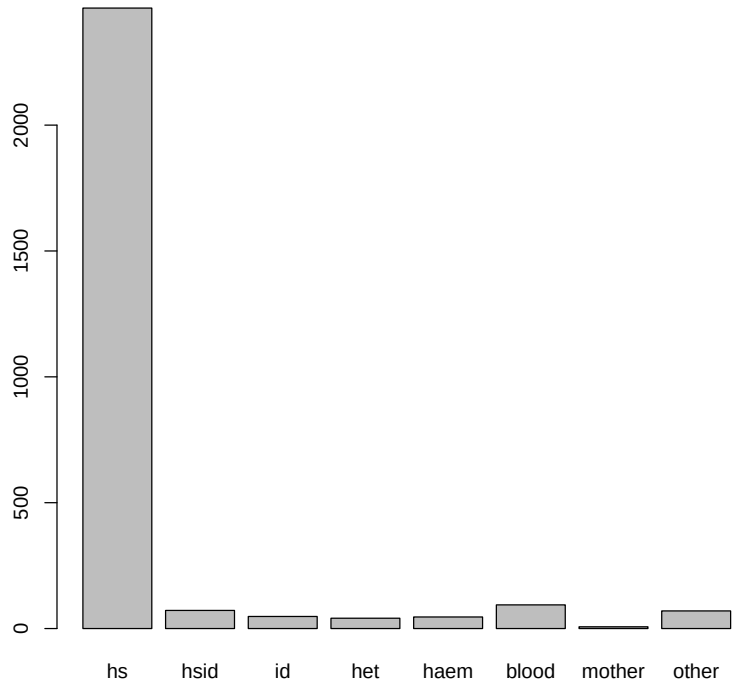
17. Load the MASS package and produce the following plot with the Aids2 dataset:

```
library(MASS)
barplot(table(Aids2$state))
```



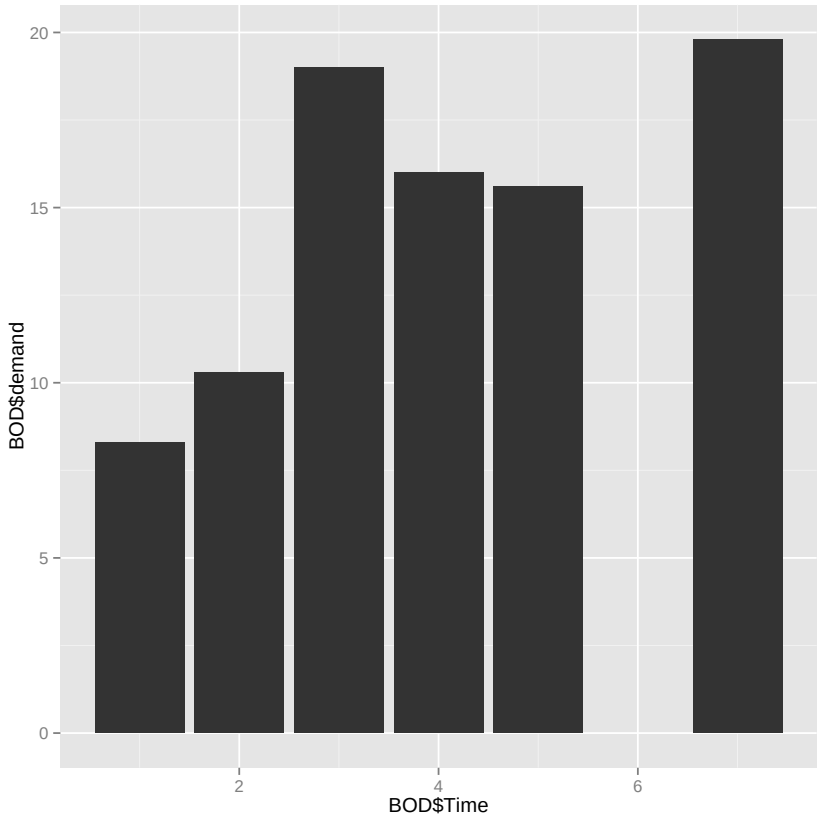
18. Load the MASS package and produce the following plot with the Aids2 dataset:

```
library(MASS)
barplot(table(Aids2$T.categ))
```



19. Load the ggplot2 package and produce the following plot with the BOD dataset. It's built into R so you do not need to load any packages:

```
library(ggplot2)
qplot(BOD$Time, BOD$demand, geom = "bar", stat = "identity")
```



20. Load the ggplot2 package and produce the following plot with the BOD dataset. It's built into R so you do not need to load any packages:

```
library(ggplot2)
qplot(factor(BOD$Time), BOD$demand, geom = "bar", stat = "identity")
```