MA4605 Lab 1 Report

Name & ID Number

Date of lab session

Lab report

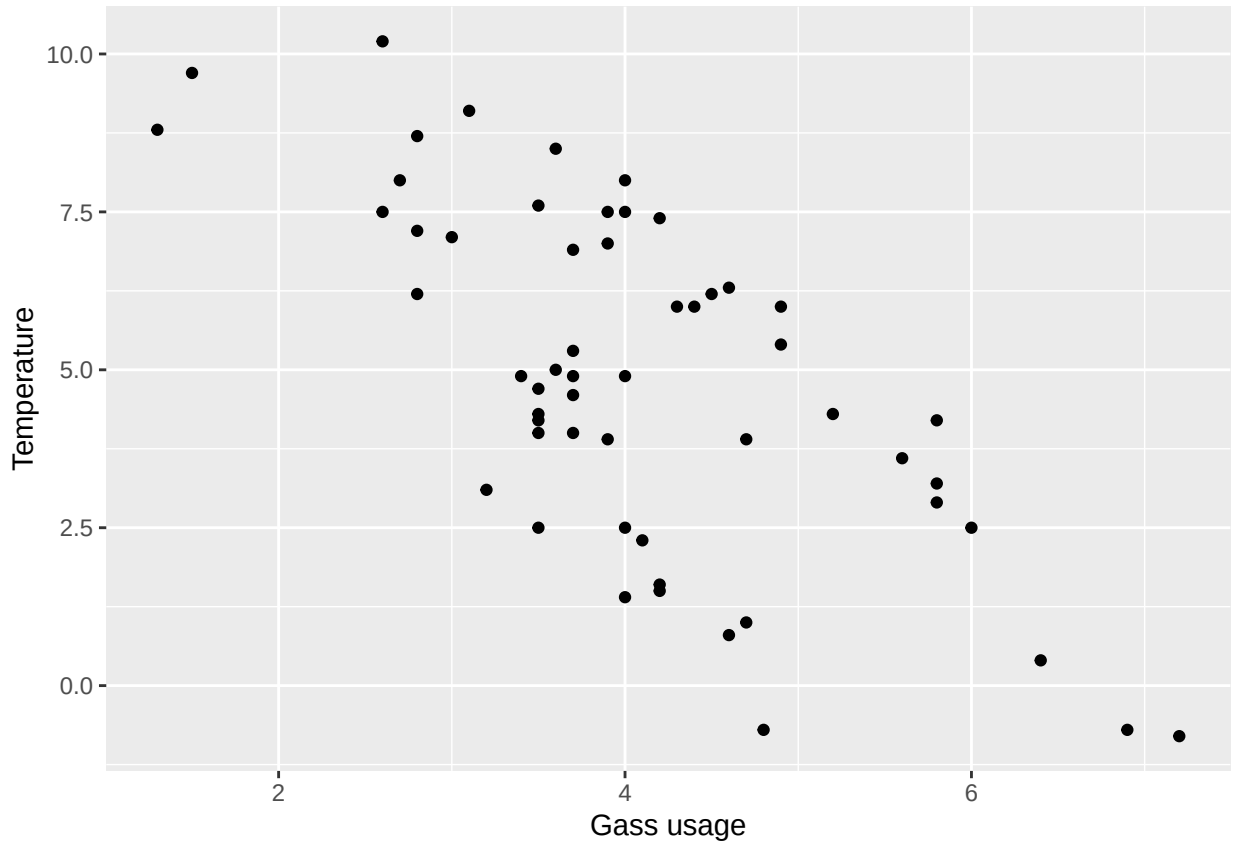
Exercise 1:

```
# enter your code for Exercise 1 here
## we can use the $ sign with the col name to get the first var
whiteside$Insul
```

```
##  [1] Before Before Before Before Before Before Before Before Before Before
## [11] Before Before Before Before Before Before Before Before Before Before
## [21] Before Before Before Before Before Before After  After  After  After
## [31] After  After  After  After  After  After  After  After  After  After
## [41] After  After  After  After  After  After  After  After  After  After
## [51] After  After  After  After  After  After
## Levels: Before After
```

We have information about when insulation was put in and the temperate and gass usages before and after.

```
ggplot(aes(x=Gas, y=Temp), data=whiteside) +
  geom_point() +
  ylab("Temperature") +
  xlab("Gass usage")
```

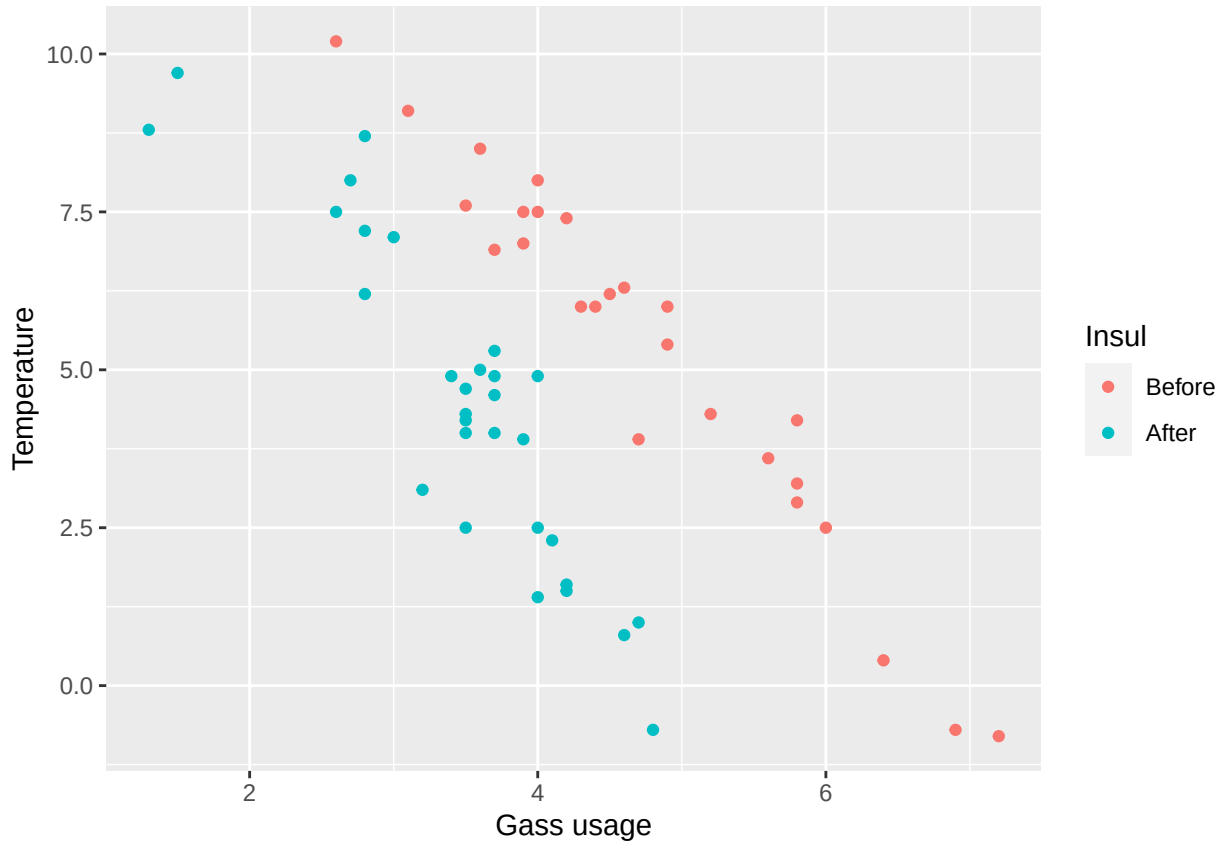


We can see from the above plot that as temperature decreases the gass usage increases.

Exercise 2:

We can also note that gass usage **dropped** the insulation was installed in the house.

```
ggplot(aes(x=Gas, y=Temp, color = Insul), data=whiteside) +
  geom_point() +
  ylab("Temperature") +
  xlab("Gass usage")
```



Exercise 3:

```
# enter your code for Exercise 3 here

# that would the dataset of all rows with before in insul col and the cols gas and temp
whiteside.before <-
  whiteside %>%
  filter(Insul == "Before") %>%
  select(Gas, Temp)

whiteside.after <-
  whiteside %>%
  filter() %>%
  select(Gas, Temp)
```

Exercise 4:

We can see from the following summary measure that the mean amount of gas used is less after insulation was installed.

```
# enter your code for Exercise 4 here

whiteside %>%
  group_by(Insul) %>%
  summarise(mean_gas = mean(Gas)) %>%
  kable() %>%
  kable_styling()
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

Insul	mean_gas
Before	4.750000
After	3.483333