Quarto Computations

This dataset contains a subset of the fuel economy data from the EPA. Specifically, we use the `mpg` dataset from the **ggplot2** package.

```
library(ggplot2)
```

Here is the cars data:

```
mpg
```

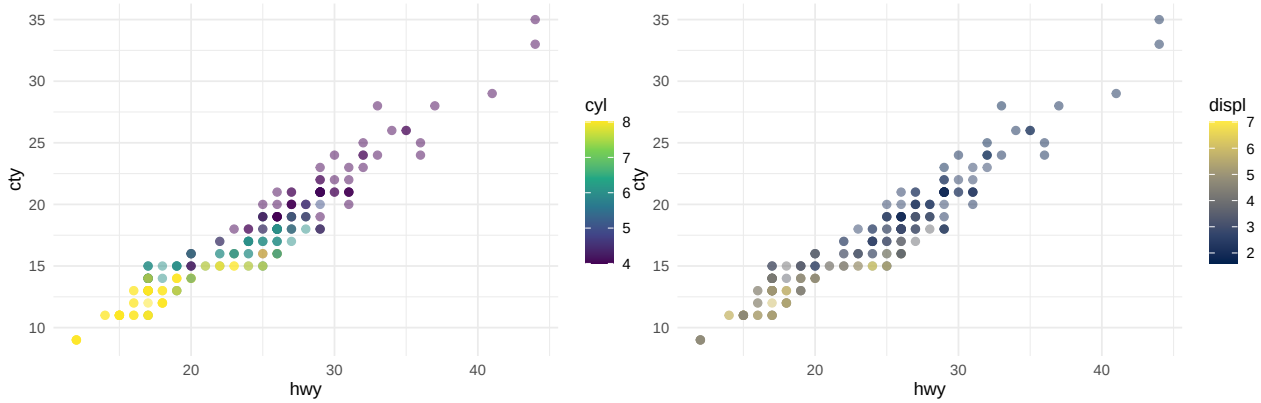
Table 1: **?(caption)**

```
# A tibble: 234 x 11
   manufacturer model      displ  year   cyl trans drv     cty   hwy fl    class
   <chr>        <chr>      <dbl> <int> <int> <chr> <chr> <int> <int> <chr> <chr>
 1 audi         a4           1.8  1999     4 auto~ f        18    29 p     comp~
 2 audi         a4           1.8  1999     4 manu~ f        21    29 p     comp~
 3 audi         a4           2    2008     4 manu~ f        20    31 p     comp~
 4 audi         a4           2    2008     4 auto~ f        21    30 p     comp~
 5 audi         a4           2.8  1999     6 auto~ f        16    26 p     comp~
 6 audi         a4           2.8  1999     6 manu~ f        18    26 p     comp~
 7 audi         a4           3.1  2008     6 auto~ f        18    27 p     comp~
 8 audi         a4 quattro   1.8  1999     4 manu~ 4        18    26 p     comp~
 9 audi         a4 quattro   1.8  1999     4 auto~ 4        16    25 p     comp~
10 audi         a4 quattro   2    2008     4 manu~ 4        20    28 p     comp~
# ... with 224 more rows
```

> **Note**
>
> There are some graphs coming.

```
ggplot(mpg, aes(x = hwy, y = cty, color = cyl)) +
  geom_point(alpha = 0.5, size = 2) +
  scale_color_viridis_c() +
  theme_minimal()

ggplot(mpg, aes(x = hwy, y = cty, color = displ)) +
  geom_point(alpha = 0.5, size = 2) +
  scale_color_viridis_c(option = "E") +
  theme_minimal()
```



(a) Color by number of cylinders

(b) Color by engine displacement, in liters

Figure 1: City and highway mileage for 38 popular models of cars.

The plots in Figure 1 show the relationship between city and highway mileage for 38 popular models of cars. The original dataset is shown in **?@tbl-mpg**. In Figure 1a the points are coloured by the number of cylinders while in Figure 1b the points are coloured by engine displacement.