

# mtcars

R Markdown documents allow us to interweave narrative text and R code. For more details on using R Markdown see <http://rmarkdown.rstudio.com> (<http://rmarkdown.rstudio.com>).

R contains several datasets to allow a user to explore various features of the software before we have our own data to work with. One of these datasets is called mtcars.

The data, from 1974, details 10 aspects of design and performance for 32 car models.

The following is a summary of the data for a subset of the variables:

```
##      mpg      cyl      disp      wt
## Min.   :10.40  Min.   :4.000  Min.   : 71.1  Min.   :1.513
## 1st Qu.:15.43  1st Qu.:4.000  1st Qu.:120.8  1st Qu.:2.581
## Median :19.20  Median :6.000  Median :196.3  Median :3.325
## Mean   :20.09  Mean   :6.188  Mean   :230.7  Mean   :3.217
## 3rd Qu.:22.80  3rd Qu.:8.000  3rd Qu.:326.0  3rd Qu.:3.610
## Max.   :33.90  Max.   :8.000  Max.   :472.0  Max.   :5.424
```

And here is a tabular view of the data for these same variables for all cars with V6 engine, sorted by increasing mpg

	mpg	cyl	disp	wt
Merc 280C	17.8	6	167.6	3.440
Valiant	18.1	6	225.0	3.460
Merc 280	19.2	6	167.6	3.440
Ferrari Dino	19.7	6	145.0	2.770
Mazda RX4	21.0	6	160.0	2.620
Mazda RX4 Wag	21.0	6	160.0	2.875
Hornet 4 Drive	21.4	6	258.0	3.215

What we really want to know though, is, is there a correlation between a car's weight, and it's MPG. Well, actually, being in Canada, we want to know this relation in KPG. So, first we'll add two columns to our data that contains the converted values (MPG to KPL and lbs to Kg, the latter rounded to the nearest whole number) and then we'll run a scatter plot to investigate.

