Tarea 4

Representación y tabulación de datos

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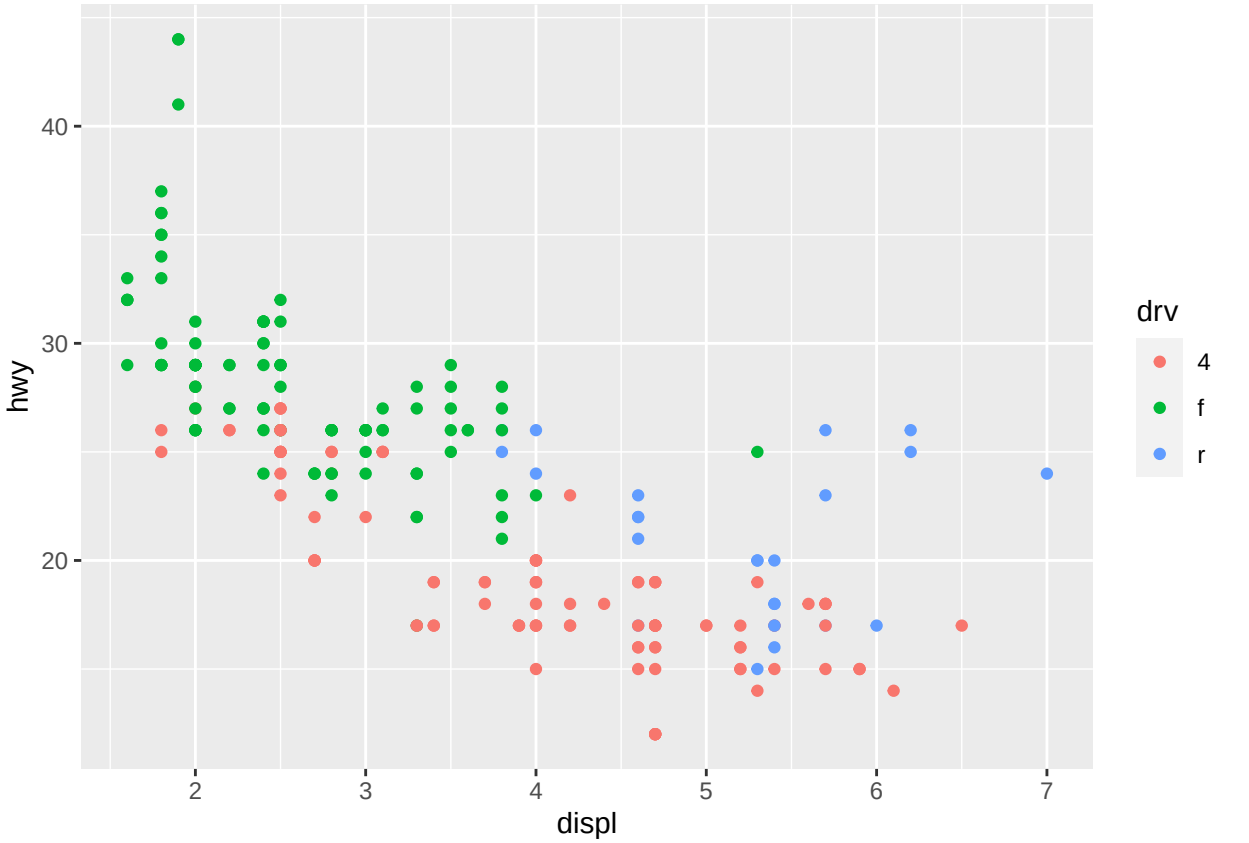
Trabajamos con el conjunto de datos `mpg`, que se insrtala al instalar ggplot2

```
library(ggplot2)
head( mpg )
```

```
## # A tibble: 6 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(l5)   f        18    29 p     compa~
## 2 audi         a4      1.8  1999     4 manual(m5) f        21    29 p     compa~
## 3 audi         a4      2    2008     4 manual(m6) f        20    31 p     compa~
## 4 audi         a4      2    2008     4 auto(av)   f        21    30 p     compa~
## 5 audi         a4      2.8  1999     6 auto(l5)   f        16    26 p     compa~
## 6 audi         a4      2.8  1999     6 manual(m5) f        18    26 p     compa~
```

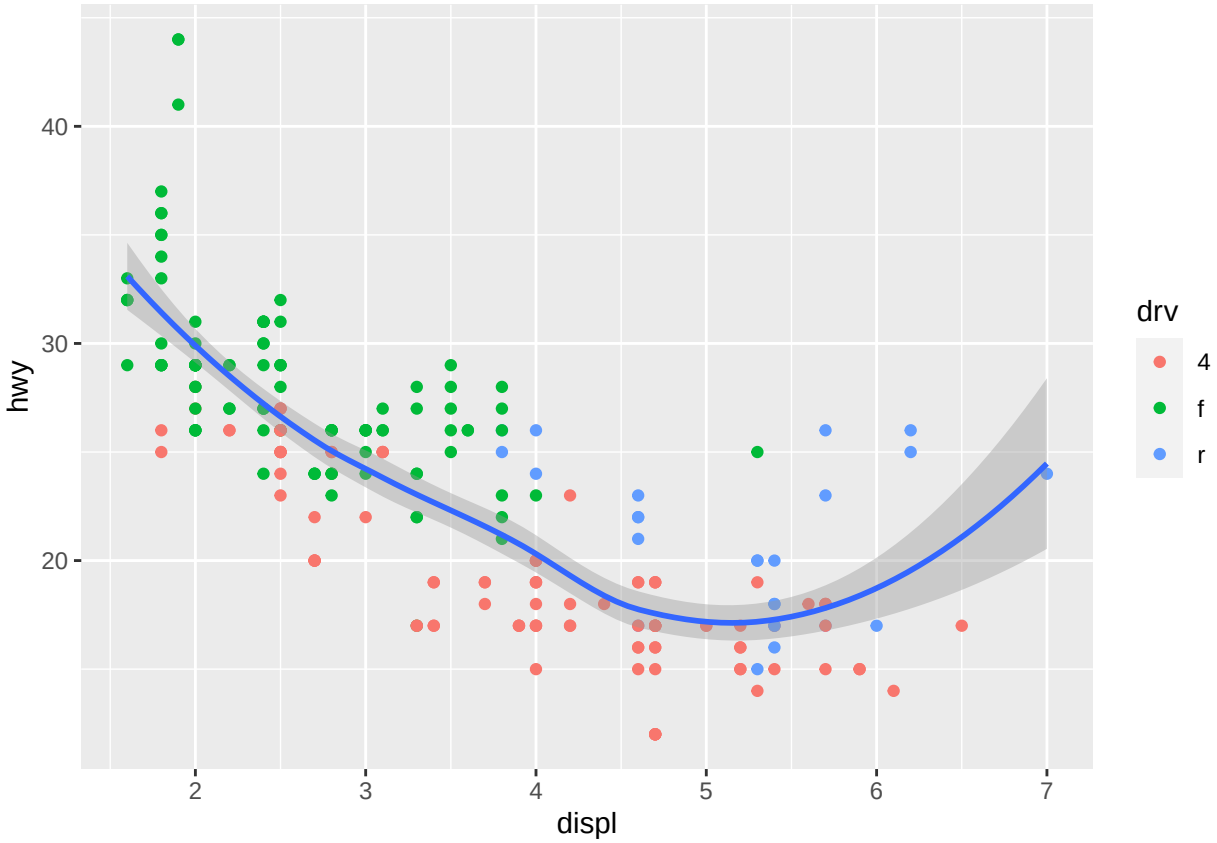
1. Partiendo del gráfico siguiente, añade una curva que se ajuste a los datos. (Nota explora la función `stat_smooth()`)

```
ggplot( data = mpg, aes( x = displ, y = hwy ) ) +
    geom_point( aes( colour = drv ) )
```



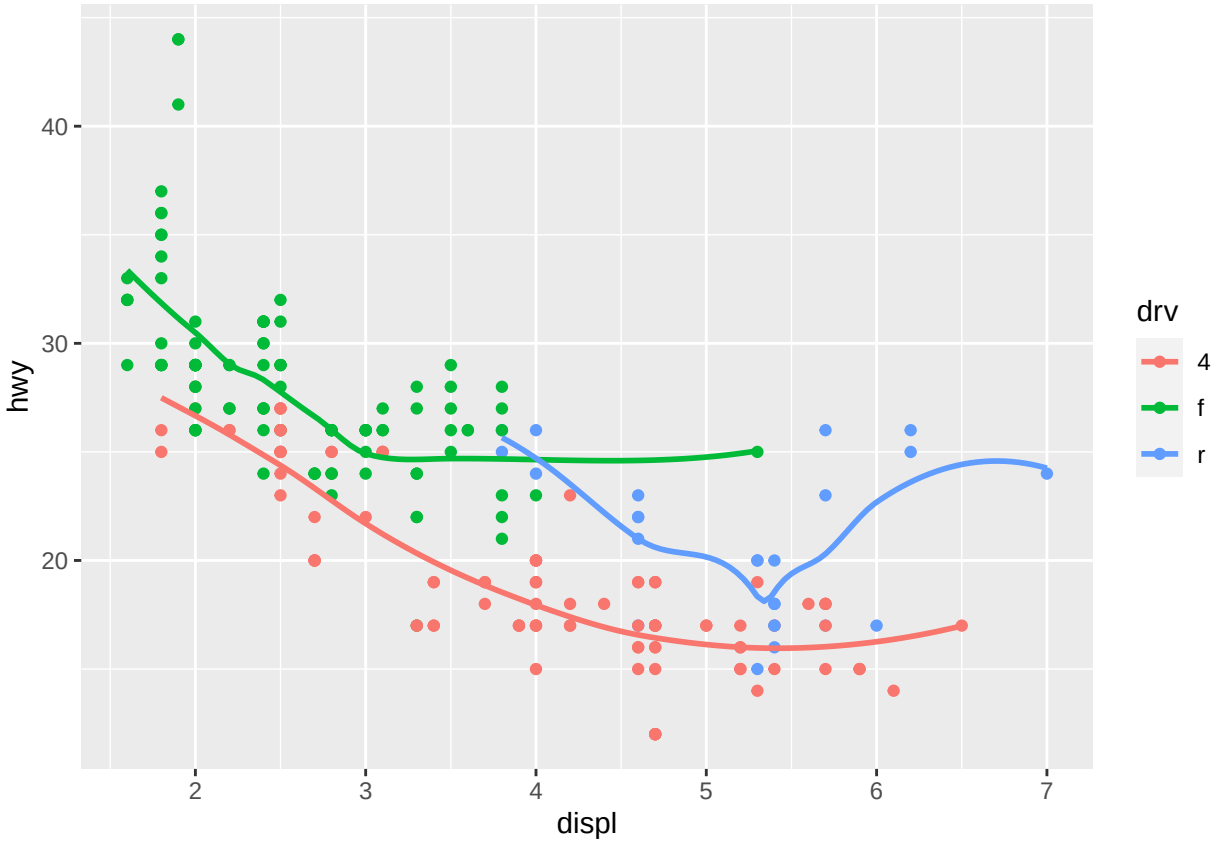
Añado la curva

```
ggplot( data = mpg, aes( x = displ, y = hwy ) ) +
    geom_point( aes( colour = drv ) ) + stat_smooth()
```



2. Haz que también se dibuje una curva distinta para cada nivel de `drv`. Haz que no aparezca el intervalo de confianza (Sugerencia: explora el parametro `se` de `geom_smooth()`)

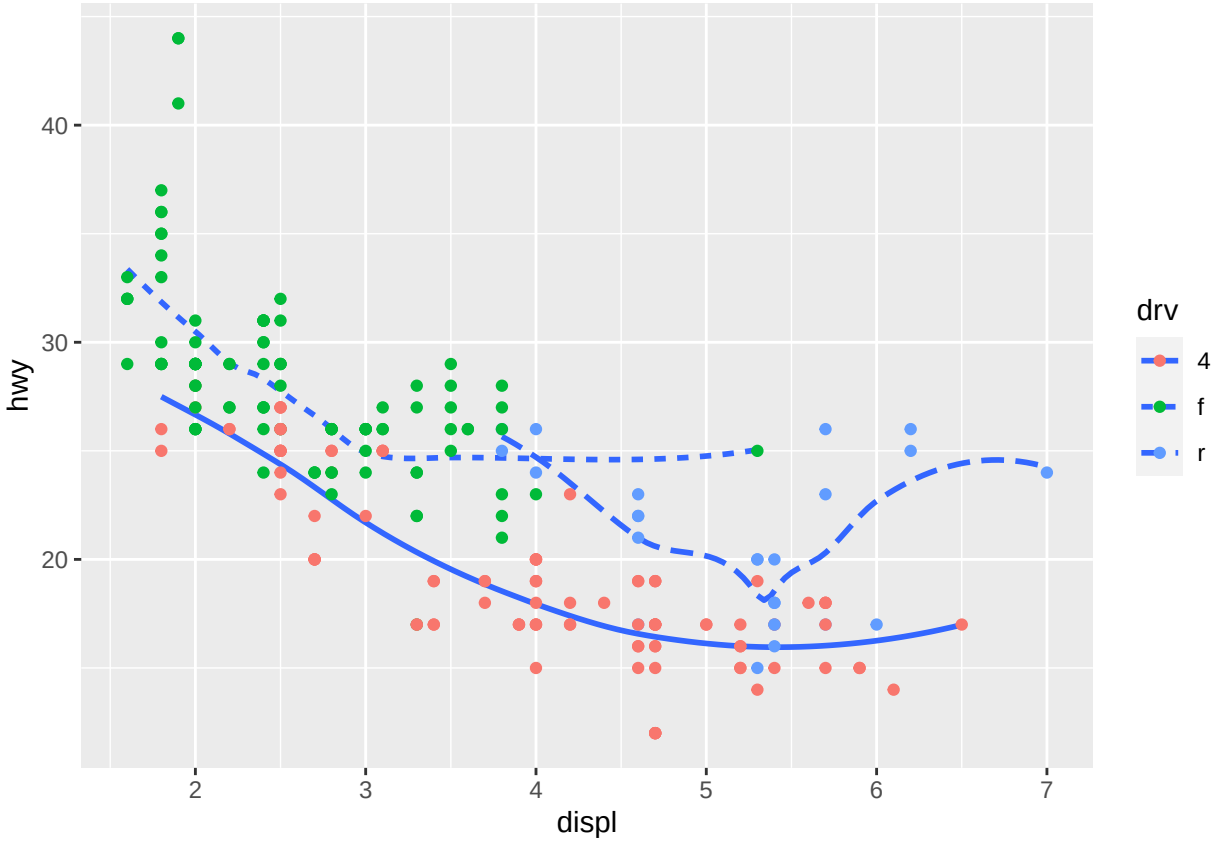
```
ggplot( data = mpg, aes( x = displ, y = hwy ) ) +
    geom_point( aes( colour = drv ) ) + geom_smooth( aes(color = drv), se=FALSE)
```



3. Trata de reproducir el siguiente gráfico

El código es:

```
ggplot( data = mpg, aes( x = displ, y = hwy ) ) + geom_smooth( aes(linetype = drv), se=FALSE) +
    geom_point( aes( colour = drv ) )
```



4. Siempre es importante dejar traza de la sesión, lo hacemos con la función `sessionInfo()`

```
sessionInfo()
```

```
## R version 4.0.4 (2021-02-15)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 19041)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=Spanish_Spain.1252  LC_CTYPE=Spanish_Spain.1252
## [3] LC_MONETARY=Spanish_Spain.1252 LC_NUMERIC=C
## [5] LC_TIME=Spanish_Spain.1252
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] ggplot2_3.3.3 knitr_1.33
##
## loaded via a namespace (and not attached):
##  [1] pillar_1.6.0      compiler_4.0.4    highr_0.9         tools_4.0.4
##  [5] digest_0.6.27     lattice_0.20-41   nlme_3.1-152      evaluate_0.14
##  [9] lifecycle_1.0.0   tibble_3.1.1      gtable_0.3.0      mgcv_1.8-33
## [13] pkgconfig_2.0.3   rlang_0.4.10      Matrix_1.3-2      cli_2.5.0
## [17] rstudioapi_0.13   yaml_2.2.1        xfun_0.22         withr_2.4.2
## [21] stringr_1.4.0     dplyr_1.0.5       generics_0.1.0    vctrs_0.3.7
## [25] grid_4.0.4        tidyselect_1.1.0  glue_1.4.2        R6_2.5.0
## [29] fansi_0.4.2       rmarkdown_2.7     purrr_0.3.4       farver_2.1.0
## [33] magrittr_2.0.1    splines_4.0.4     scales_1.1.1      ellipsis_0.3.1
## [37] htmltools_0.5.1.1 colorspace_2.0-0  labeling_0.4.2    utf8_1.2.1
## [41] stringi_1.5.3     munsell_0.5.0     crayon_1.4.1
```