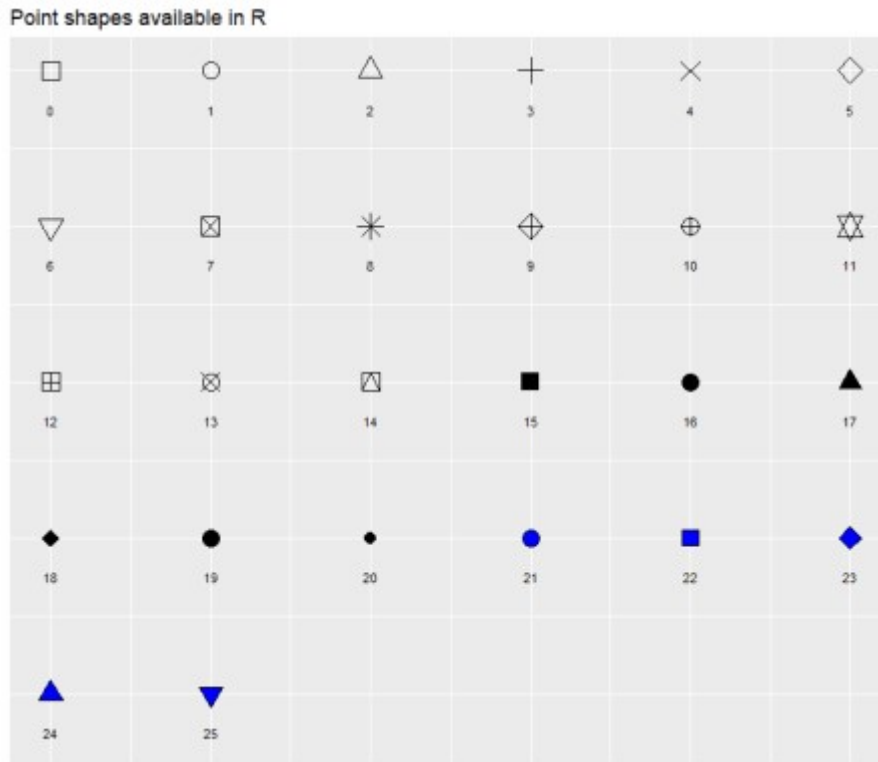


R plot pch symbols, In this tutorial we are going to describe different pch values in R.
The plotting argument used to specify point shapes is **pch**.

Let's install the `ggpubr` package from cran, and then plot different shapes in R.

```
#install.packages("ggpubr")  
ggpubr::show_point_shapes()
```



R Plot pch Symbols

The 25 different points symbols are commonly used in R for making beautiful graphs.

[tidyverse in r – Complete Tutorial » Unknown Techniques »](#)

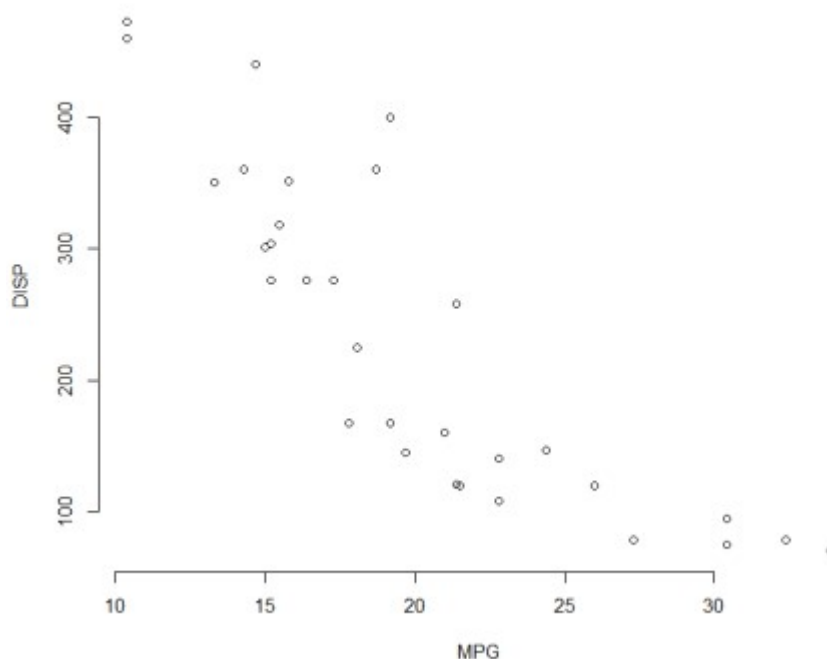
- pch = 0, square
- pch = 1, circle
- pch = 2, triangle point up
- pch = 3, plus
- pch = 4, cross
- pch = 5, diamond
- pch = 6, triangle point down
- pch = 7, square cross
- pch = 8, star
- pch = 9, diamond plus
- pch = 10, circle plus
- pch = 11, triangles up and down
- pch = 12, square plus
- pch = 13, circle cross
- pch = 14, square and triangle down
- pch = 15, filled square

- pch = 16, filled circle
- pch = 17, filled triangle point-up
- pch = 18, filled diamond
- pch = 19, solid circle
- pch = 20, bullet (smaller circle)
- pch = 21, filled circle blue
- pch = 22, filled square blue
- pch = 23, filled diamond blue
- pch = 24, filled triangle point-up blue
- pch = 25, filled triangle point down blue

Let create a default plot pch = 1 (empty circle)

[Deep Neural Network in R » Keras & Tensor Flow](#)

```
plot(x = mtcars$mpg, y = mtcars$disp, frame = FALSE,  
     xlab = "MPG", ylab = "DISP")
```

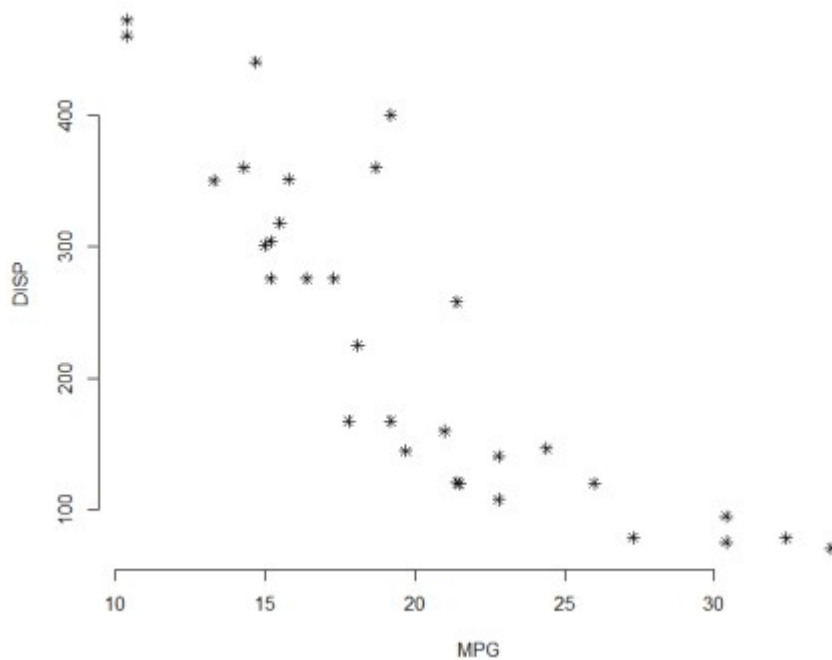


As mentioned above, we can change different pch values.

[Principal component analysis \(PCA\) in R »](#)

Change plot symbol to pch = 8 (star)

```
plot(x = mtcars$mpg, y = mtcars$disp, frame = FALSE,  
     xlab = "MPG", ylab = "DISP",  
     pch = 8)
```



If you want to change the color and the size of points, use the following arguments

- `col`: For example, `col = "red"` or `col = "#FF0000"`.
- `cex`: the size of point symbols. Numeric values, 1=default, 1.5 is 50% larger, 0.5 is 50% smaller, etc.

For making attractive plots you can make use of `bg` and `lwd` arguments also.

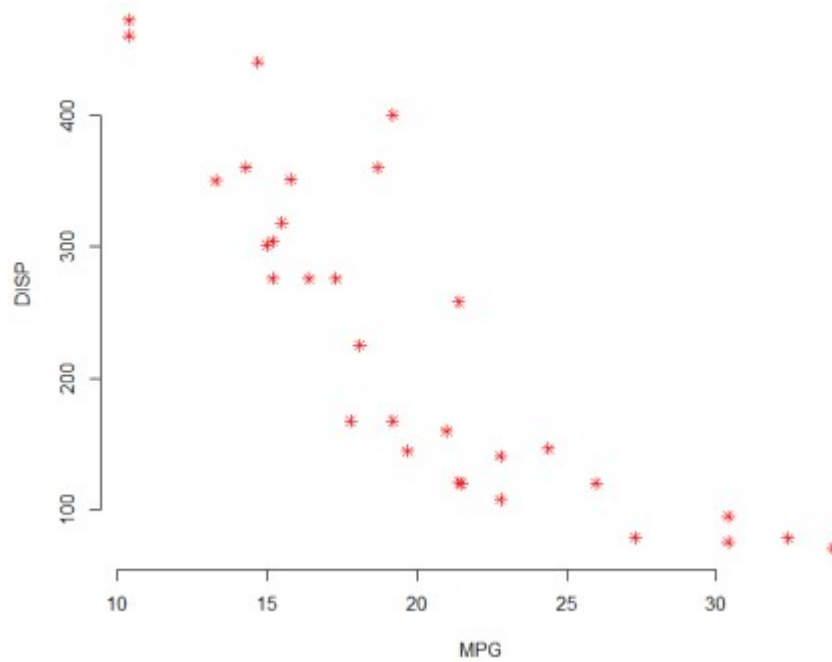
- `bg`: plot background color
- `lwd`: line width relative to the default (default=1). 2 is twice as wide

If you want to know more about `lwd` check it [here](#)

[Line types in R: Ultimate Guide For R Baseplot and ggplot »](#)

Change color and background

```
plot(x = mtcars$mpg, y = mtcars$displ, frame = FALSE,  
     xlab = "MPG", ylab = "DISP",  
     pch = 8, col = "#FF0000")
```



Use `pch = 21` and change border line width (`lwd`), and background color (`bg`)

```
plot(x = mtcars$mpg, y = mtcars$displ, frame = FALSE,  
     xlab = "MPG", ylab = "DISP",  
     pch = 21, bg = "red", col = "black",  
     lwd = 0.9, cex = 1.5)
```

