Exercises-3: plots- basic

Nathan Green, Imperial College London

07/09/2019

1. Plot Miles/(US) gallon versus Rear axle ratio by `plot(mpg,drat)`. On which axis does `mpg` appear?

a. `mpg` appears on the x axis
b. `mpg` appears on the y axis

2. Is a scatterplot recommended for continuous or dichotomous variables?

a. continuous
b. dichotomous

3. Produce a histogram with `hist(gear)`. What do you see?

a. frequencies
b. probability density

4. Change type of visualization of our scatterplot in Exercise 1 `plot(mpg,drat,type="")`. If we want to see lines what we have to type into `""`:

a. `type="l"`
b. `type="p"`

5. Now we want to see both point and lines in our plot. What we have to type into `plot(mpg,drat,type="")`.

a. `type=c("p","l")`
b. `type="b"`

6. Add another variable to our plot, for example `Weight`. What command do we have to use:

a. `plot(mpg, drat); plot(mpg, wt)`
b. `plot(mpg, drat); points(mpg, wt)`

7. Now we have added a new variable to our plot. Suppose we want to use two different colours to separate the points. Type `plot(mpg, drat, col=2)`. What colour have we selected:

a. red
b. green

8. Now we want to differentiate the two different variables in the scatterplot:

a. Let's change the colours of the second plot
b. Change use two different types of plot (e.g. points,lines)

9. Now we want to highlight a variable in the final plot. Type: `plot(mpg, drat, lwd=2) ; points(mpg, wt, lwd=1)`. Which plot is highlighted:

a. plot1 (`mpg`, `drat`)
b. plot2 (`mpg`, `wt`)

10. Finally choose four different continuous variables from mtcars set and produce:

a. Plot with lines and points for different variables with different colours (hint: change y axis parameters by adding command `ylim=c(0,30)` to plot [e.g. `plot(a,b,type="p",ylim=c(0,30))`.

b. Choose one variable from each and highlighted it set red colour and a broad line.

[https://www.r-exercises.com/2015/10/09/vector-exercises/]