2.1# The predictor vector.

x <- c(151, 174, 138, 186, 128, 136, 179, 163, 152, 131)

# The resposne vector.

y <- c(63, 81, 56, 91, 47, 57, 76, 72, 62, 48)

# Apply the lm() function.

relation <- lm(y~x)

# Find weight of a person with height 170.

a <- data.frame(x = 170)

result <- predict(relation,a)

print(result)

2.2# Create the predictor and response variable.

x <- c(151, 174, 138, 186, 128, 136, 179, 163, 152, 131)

y <- c(63, 81, 56, 91, 47, 57, 76, 72, 62, 48)

relation <- lm(y~x)

# Give the chart file a name.

png(file = "linearregression.png")

# Plot the chart.

plot(y,x,col = "blue",main = "Height & Weight Regression",

abline(lm(x~y)),cex = 1.3,pch = 16,xlab = "Weight in Kg",ylab = "Height in cm")

# Save the file.

dev.off()

3.box plotting

boxplot(mtcars$mpg, col="green")

3.1 .histogram

hist(mtcars$mpg, col = "green") ## Plot 1

hist(mtcars$mpg, col = "green", breaks = 25) ## Plot 2

hist(mtcars$mpg, col = "green", breaks = 50) ## Plot 3

3.3.scatter plot

with(mtcars, plot(mpg, qsec))

3.4bar plotting

barplot(table(mtcars$carb), col="green")

3.5 box plotting two dimension

boxplot(mpg~gear, data=mtcars, col = "green")

4.1 mean

# Defining vector

x <- c(3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56, 23)

# Print mean

print(mean(x))

4.2median

# Defining vector

x <- c(3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56, 23)

# Print Median

median(x)

4.3 mode

# Defining vector

x <- c(3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56,23, 29, 56, 37, 45, 1, 25, 8)

# Generate frequency table

y <- table(x)

# Print frequency table

print(y)

# Mode of x

m <- names(y)[which(y == max(y))]//////# Print mode//////print(m)

|  |  |  |  |
| --- | --- | --- | --- |
| 7.weka  Explorer  Open file  Window c  Program file  Weka3.8.6  Data  Weather.nominal  …..  …… | 8.iris  Cluster  Choose  Simplekmeans  start | 9.iris  cluster  Choose  Em  start | 10.iris  Cluster  Choose  Hierarchical cluster  start |
| 11.super market  Associate  Choose  Apriori  start | 12.super market  Associate  Choose  Fpgrowth  start | 13.credit g  Classify  Choose  Decision tree  start | 14.credit g  Classify  Choose  Functions  Smo  start |
| 15.superbucket  Associate  Fg growth  apriori | 16 | 17.breast cancer  Classify  Bayes  Navie bayes  start | 18.breast cancer  Classify  Choose  Make density  start |

19. # Give the chart file a name.

png(file = "boxplot.png")

# Plot the chart.

boxplot(mpg ~ cyl, data = mtcars, xlab = "Number of Cylinders",

ylab = "Miles Per Gallon", main = "Mileage Data")

# Save the file.

dev.off()

22. # Give the chart file a name.

png(file = "histogram\_lim\_breaks.png")

# Create the histogram.

hist(main="Airpassenger",AirPassengers,xlab = "passengers",col = "green",border = "red")

# Save the file.

dev.off()

24. install.packages("ggplot2")

install.packages("dplyr")

install.packages("tidyr")

library(ggplot2)

library(dplyr)

library(tidyr)

pl <- ggplot(data = mtcars, aes(x = qsec))

pl <- pl + geom\_line(aes(y = mpg))

pl <- pl + geom\_point(aes(y = mpg))

pl <- pl + geom\_line(aes(y = cyl))

pl <- pl + geom\_point(aes(y = cyl))

pl <- pl + theme\_classic()

pl

25. # Give the chart file a name.

png(file = "histogram\_lim\_breaks.png")

# Create the histogram.

hist(main="Toothgrowth",ToothGrowth$len,xlab = "passengers",col = "green",border = "red")

# Save the file.

dev.off()

23. install.packages("plotrix")

part ("mtcars")

pie3D(part,labels=mtcars$mpg,explode=0.1,main='cars using mpg')

head(mtcars)