Problem 1

# a)

x <- c(4, 1, 1, 4)

x

# b)

y <- c(1, 4)

y

# c)

x - y

# result of the difference between x and y is 3 -3 0 0

# d)

s <- c(x, y)

# e)

rep(s, 10)

# resulting vector is called "es"

es <- rep(s, 10)

length(es)

# f)

rep(s, each =3)

# g)

seq(7, 21, by=1)

7:21

# h)

# the sequence is called "h"

h <- seq(7, 21, by=1)

length(h)

Problem 2

# a)

xmin <- c(23.0, 20.5, 28.2, 20.3, 22.4, 17.2, 18.2)

xmax <- c(25.0, 22.8, 31.2, 27.3, 28.4, 20.2, 24.1)

date <- c('03Mon18', '04Tue18', '05Wed18', '06Thu18', '07Fri18', '08Sat18', '09Sun18')

# b)

xmax - xmin

# c)

averagexmin <- mean(xmin)

averagexmin

averagexmax <- mean(xmax)

averagexmax

# d)

xmin[xmin < mean(xmin)]

# e)

xmin[xmin > mean(xmin)]

# f)

names(xmin) <- date

names(xmax) <- date

names(xmax)

names(xmin)

# g)

temperatures <- data.frame(xmin,xmax)

temperatures

# h)

temperatures <- within(temperatures, {xminFahrenheit <- (xmin\*9/5+32) })

temperatures

# i)

xminFahrenheit <- xmin\*9/5+32

xmaxFahrenheit <- xmax\*9/5+32

Fahrenheit <- data.frame(xminFahrenheit, xmaxFahrenheit)

Fahrenheit

# j)

j1Fahrenheit <- Fahrenheit[c(1:5),] # including the first five days

j1Fahrenheit

j2Fahrenheit <- Fahrenheit[-c(6:7),] # ii) excluding the last two days

j2Fahrenheit