1. How many vowels are there in the names of USA States?

library(stringr)

states=row.names(USArrests)

vowels = c("a", "e", "i", "o", "u")

# vector for storing results

num\_vowels = vector(mode = "integer", length = 5)

# calculate number of vowels in each name

for (j in seq\_along(vowels)) {

num\_aux = str\_count(tolower(states), vowels[j])

num\_vowels[j] = sum(num\_aux)

}

# add vowel names

names(num\_vowels) = vowels

# total number of vowels

num\_vowels

## a e i o u ## 61 28 44 36 8

# sort them in decreasing order

sort(num\_vowels, decreasing = TRUE)

## a i o e u ## 61 44 36 28 8

1. **Visualize the vowels distribution**

# barplot

barplot(num\_vowels, main = "Number of vowels in USA States names", border = NA, ylim = c(0, 80))