SET - 7

1)

```
# Define the data
x <- c(21, 62, 10, 53)
labels <- c("London", "New York", "Singapore", "Mumbai")

# Generate random rainbow colors
colors <- rainbow(length(x))

# Create the pie chart
pie(x, labels = labels, col = colors, main = "City Pie Chart")
```

2)

given mean (M) = 60, standard deviation (g) = 4
here we have to find (a) P(x ≥ 68) (b) P(x < 55)

Z=(x-mu)/sigma = (x-60)/4

.P(x ≥ 68) = P(z ≥ 2) = 0.5 - A (2) = 0.5 - 0.477 = 0.0228
.P(x < 55) = P(z < -1.25) = 0.5 - A(1.25) = 0.5 - 0.3944 = 0.106

```
p1 = pnorm (55,60,4)
p2 = 1 - pnorm (68, 60,4)

print (p1)
print(p2)
```

3)

```
data(mtcars)
model <- lm(mpg ~ ., data = mtcars)
summary(model)
```

4)

```
sequence <- c()
num <- 1
for (i in 1:47) {
  if (num %% 2 == 0 || num %% 3 == 0) {
    sequence <- c(sequence, 0)
  } else {
    sequence <- c(sequence, num)
  }
  num <- num + 1
}
sequence
```