1.rprogram

sales\_prices <- c(5, 10, 11, 13, 15, 35, 50, 55, 72, 92, 204, 215)

num\_bins <- 3

bins\_equal\_freq <- cut(sales\_prices, breaks = num\_bins, labels = FALSE)

bin\_width <- (max(sales\_prices) - min(sales\_prices)) / num\_bins

bins\_equal\_width <- cut(sales\_prices, breaks = seq(min(sales\_prices), max(sales\_prices), by = bin\_width), labels = FALSE)

num\_clusters <- 3

cluster\_data <- data.frame(sales\_prices)

clusters <- kmeans(cluster\_data, centers = num\_clusters)

bins\_clustering <- clusters$cluster

print("Equal-frequency (equi-depth) partitioning:")

print(bins\_equal\_freq)

print("Equal-width partitioning:")

print(bins\_equal\_width)

print("Clustering:")

print(bins\_clustering)

4thprogram

data<-c(200,300,400,600,1000)

min<-0

max<-1

for(i in data)

min\_max=((i-200)/(1000-200))

print(min\_max)

mean(data)

sd(data)

z\_scores <- (data-mean(data))/sd(data)

print(z\_scores)

decimal\_scaling=data/1000

print(decimal\_scaling)

6th program

data<-c(200,300,400,600,1000)

min<-0

max<-1

for(i in data)

min\_max=((i-200)/(1000-200))

print(min\_max)

mean(data)

sd(data)

z\_scores <- (data-mean(data))/sd(data)

print(z\_scores)

decimal\_scaling=data/1000

print(decimal\_scaling)

8th program

#Q1, Q2

age<-c(13,15,16,16,19,20,20,21,22,22,25,25,25,25,30,33,33,35,35,35,35,36,40,45,46,52,70)

quantile(age,.25)

quantile(age,.75)

17thprogram

age<-c(23,23,27,27,39,41,47,49,50,52,54,54,56,57,58,58,60,61)

fat<-c(9.5,26.5,7.8,17.8,31.4,25.9,27.4,27.2,31.2,34.6,42.5,28.8,33.4,30.2,34.1,32.9,41.2,35.7)

mean(age)

median(age)

sd(age)

mean(fat)

median(fat)

sd(fat)

#boxplot

boxplot(age,fat)

#scatter plot

scatter.smooth(age,fat)

#qplot

qqplot(age,fat)

1st and 29th same