rm(list=ls())

con<-c(17.3,7.7,10.4,5.1,5,56.9,79.7,3.5,57.8,124,15.1,4.3,39,8.7,6.9,57.7,252.7)

pop<-c(327.4,179.5,279.4,139.1,92.5,926.7,2186.3,96.8,523.9,935.9,444.2,119.7,300.7,201.9,194.7,1592.9, 5142.2)

df <-data.frame(con,pop)

candy.lm<-lm(pop~con, data = df)

#2

coef(candy.lm) #coefficient

summary(candy.lm)

#1

par(mfrow=c(2,2))

plot(con,pop)

lines(pop,candy.lm$fitted.values,col=2)

lines(con,candy.lm$fitted.values,col=2)

abline(candy.lm,col=3)

#3

residuals<-resid(candy.lm)

round(residuals,digits=2)

plot(residuals)

#4

anova(candy.lm)

#8

summary(candy.lm)

#11

plot(candy.lm)

#12

df <-data.frame(con,pop)

candy.lm<-lm(pop~con, data = df)

df <-data.frame(con,pop)

candy2.lm<-lm(con~pop, data = df)

coef(candy2.lm) #coefficient

summary(candy2.lm)

anova(candy2.lm)

c1=sqrt(coef(candy.lm)[2]/coef(candy2.lm)[2]);c1

x<-c(17.3,7.7,10.4,5.1,5,56.9,79.7,3.5,57.8,124,15.1,4.3,39,8.7,6.9,57.7,252.7)