clc

clear

clf

for i=1:100

A(i,1)= 20\*rand() - 10

end

disp(A)

histplot(20,A,normalization=%f)

c=zeros(20,1)

p=-10

for j=1:20

for i=1:100

if A(i,1)<=(p+1) & A(i,1)>(p)

c(j,1)= c(j,1) + 1

end

end

p=p+1

end

disp(c)

x= -9.5:9.5

plot2d(x,c,-3)

for i=1:20

X(i)=x(i)^2

end

for i=1:20

C(i)=log(c(i))

end

sx=sum(X)

sxy=sum(X.\*C)

sxx=sum(X.\*X)

sy=sum(C)

a2= ((sx\*sy) - (20\*sxy))/(sx^2 - 20\*sxx)

a1= ((sx\*sxy) - (sxx\*sy))/(sx^2 - 20\*sxx)

a=abs(exp(a1))

b=-abs(a2)

y=a\*exp(b\*X)

se=0

for i=1:100

se=se+sum((y-A(i,1)).^2)

end

disp(se)

varg=variance(A)

varc=(-1/(2\*b))^0.5

plot2d(x,y)

**console-**

error =

98967.272

graphical var. =

29.174127

calculated var. =

8.7447379

**Graph-**

