# a)

## Code

close

clc

clear

t=[0:pi/10:pi];

x=sin(t);

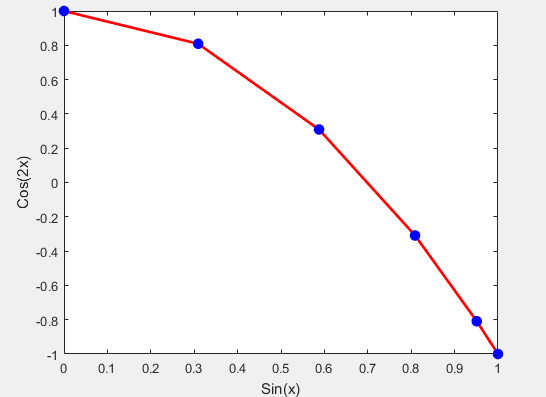
y=cos(2\*t);

plot(x,y,'-O','LineWidth',2,'color','r','MarkerSize',6,'MarkerEdgeColor','b','MarkerFaceColor','b')

xlabel('Sin(x)');

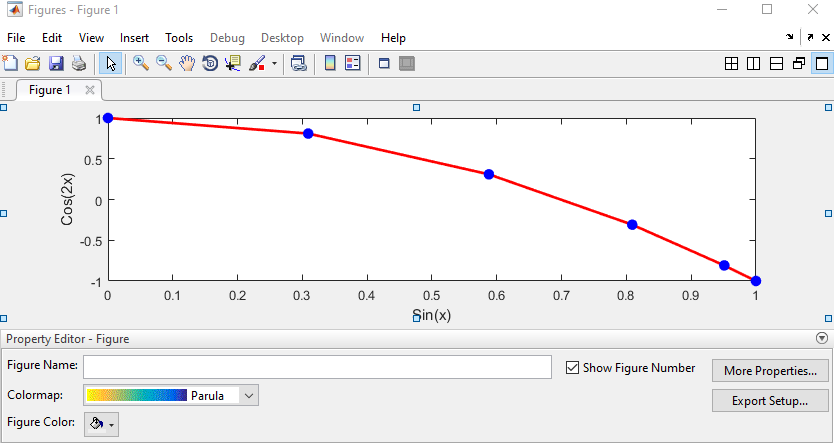
ylabel('Cos(2x)');

## Output

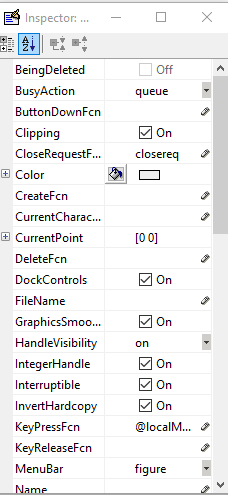


# b)

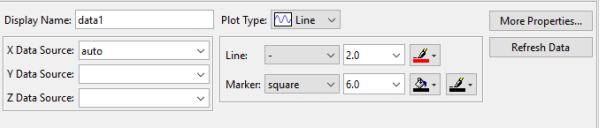
click on edit menu and select figure properties

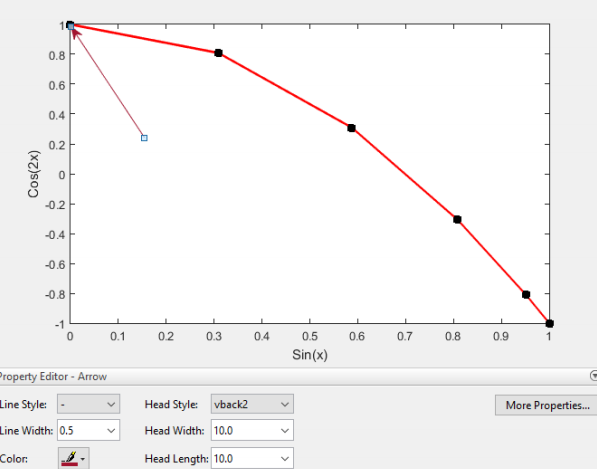


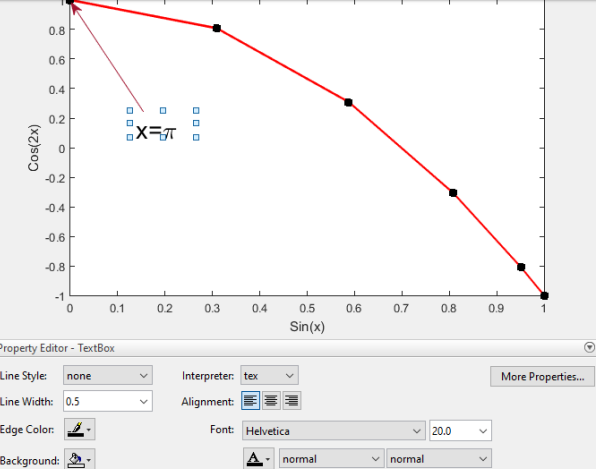
Click on more properties



Click on marker from list and select square from top down menu. select black color from MarkerEdgeColor and MarkerFaceColor.







# c)

## Code

clc

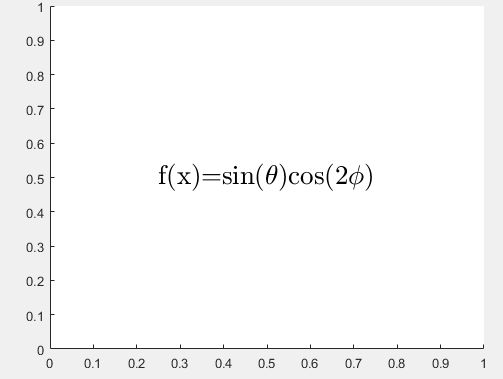
close

clear

st='f(x)=sin($\theta$)cos(2$\phi$)';

text('string',st,'interpreter','latex','fontsize',20,'pos',[0.25,0.5])

## Output



# d)

## code

clc

clear

close

x=linspace(1,10,10);

sum\_sqrx=zeros(1,length(x));

for i=1:length(x)

sum\_sqrx(i)=sum\_sqrx(i)+x(i)^2;

end

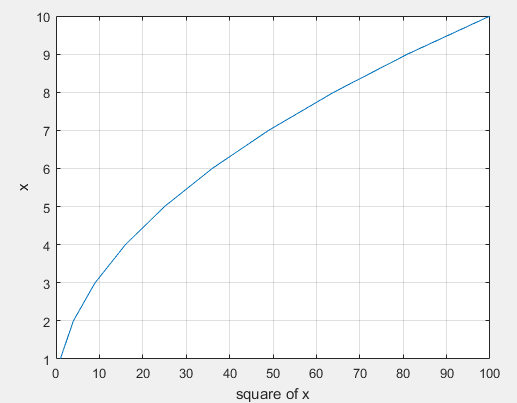
plot(sum\_sqrx,x)

xlabel('square of x')

ylabel('x')

grid on

## output

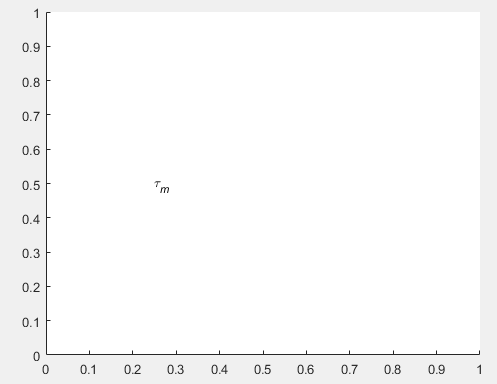


# E

## Code

text(0.25,0.5,'\tau\it\_{m}');

## Output

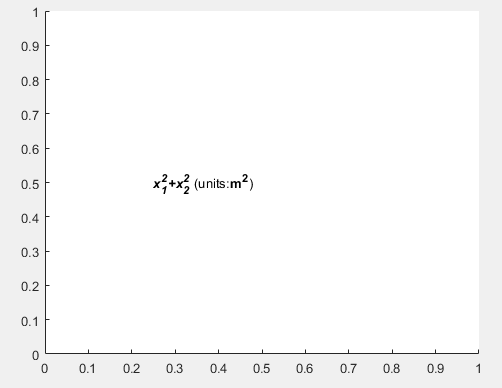


# F

## Code

text(0.25,0.5,'\bf\itx\_{1}^{2}+x\_{2}^{2} \rm(units:\bfm^{2}\rm)')

## Output



# G

## Code

clc

clear

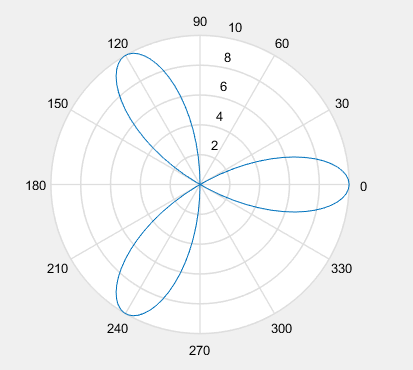
close

theta=0:0.01\*pi:2\*pi;

r=10\*cos(3\*theta);

polar(theta,r)

## Output



# H

## Code

clc

clear

close

x=0.01:0.1:100;

y=1./(2\*x.^2);

plot(x,linspace(min(y),max(y),length(x)))

title('linear plot')

xlabel('x')

ylabel('y')

grid on

figure(2)

plot(x,logspace(min(y),max(y),length(x)))

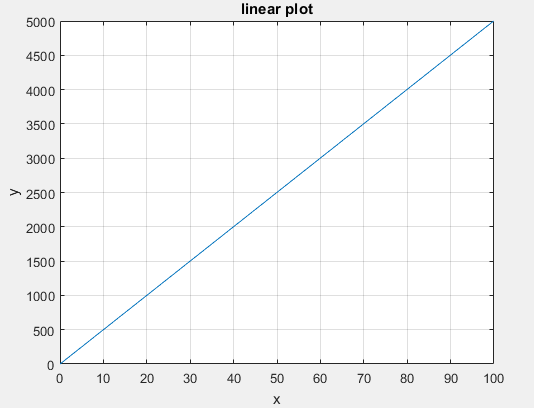
grid on

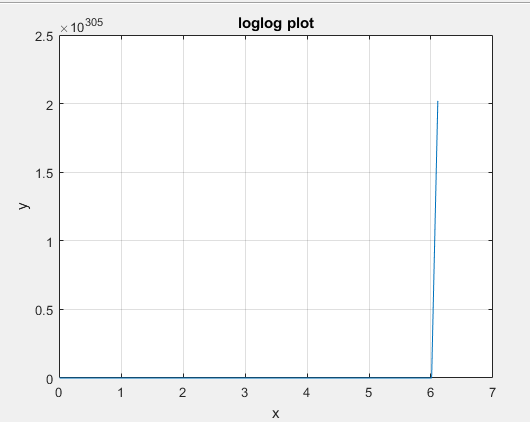
title('loglog plot')

xlabel('x')

ylabel('y')

## Output





The shape of loglog plot down to zero and suddenly move to upper and change from 0 to 2,