%1)

>> x\_co=[1,2,3,4,5,6,7,8,9,10]

x\_co =

1 2 3 4 5 6 7 8 9 10

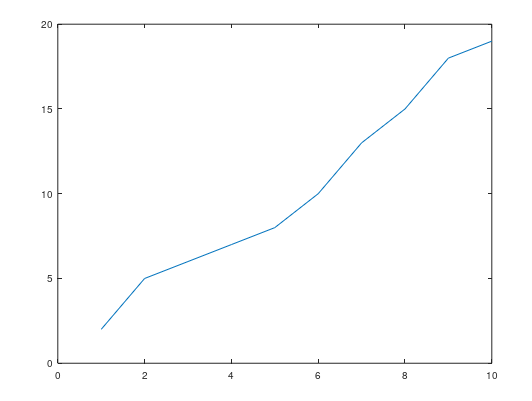
>> y\_co=[2,5,6,7,8,10,13,15,18,19]

y\_co =

2 5 6 7 8 10 13 15 18 19

>> plot(x\_co,y\_co)

%ans



%2)

p = plot(x\_co, y\_co, ':or', ...

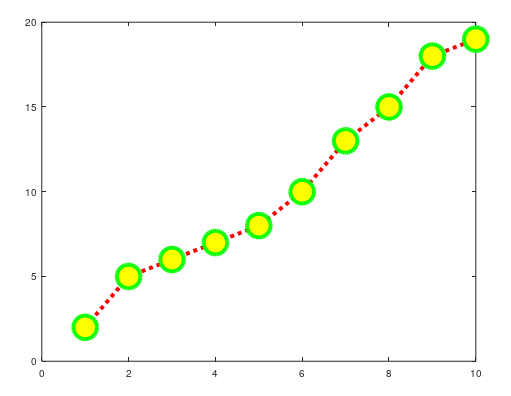
'LineWidth', 2,...

'MarkerEdgeColor', 'g',...

'MarkerFaceColor', 'y',...

'MarkerSize', 12);

%ans

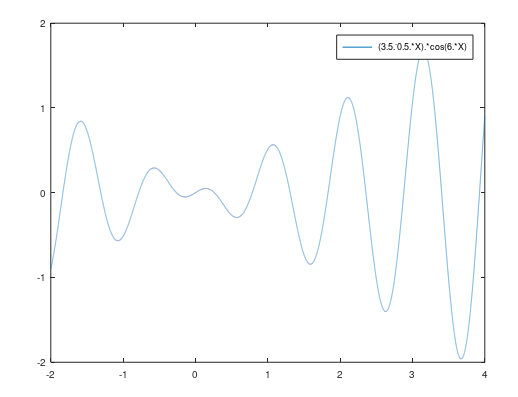


%3)

>> X=[-2:0.01:4]

>> fplot('(3.5^-0.5\*X)\*cos(6\*X)',[-2,4])

%ans



%4)

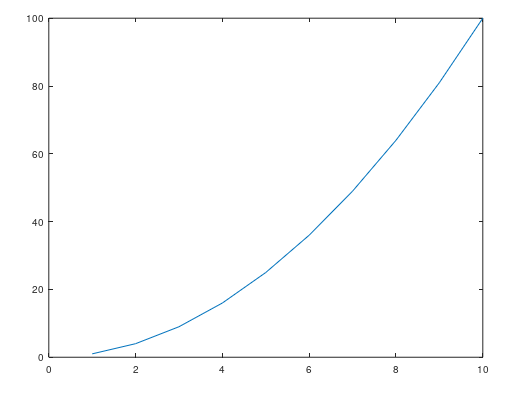
>> x=1:1:10

x =

1 2 3 4 5 6 7 8 9 10

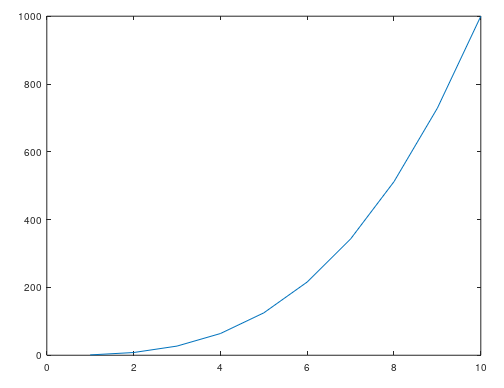
>> plot(x,power(x,2))

%ans

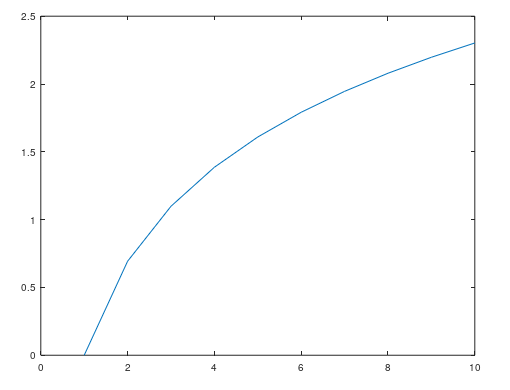


>> plot(x,power(x,3))

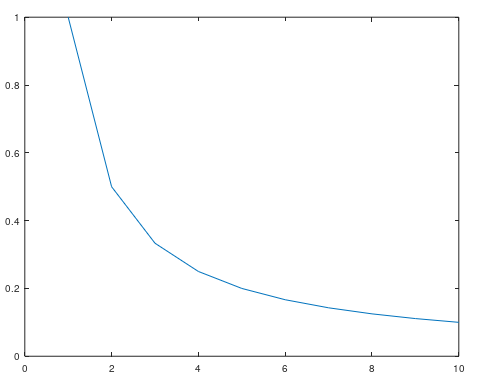
%ans



>> plot(x,ln(x))



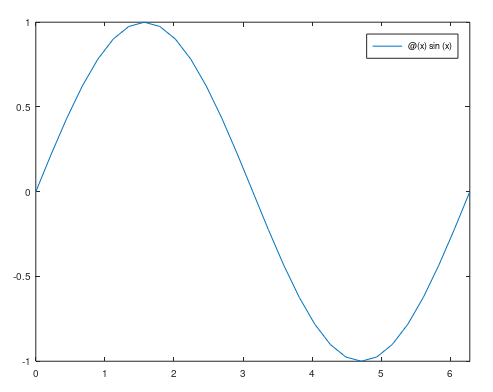
>> plot(x,power(x,-1))



%4)

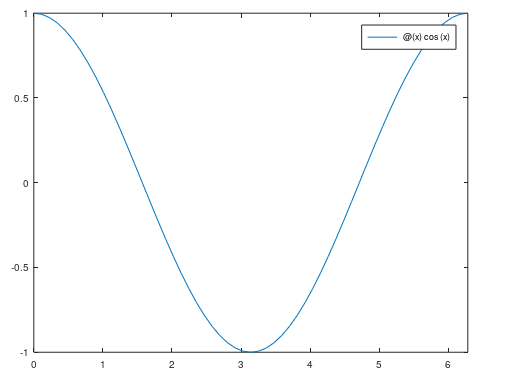
>> fplot(@(x) sin(x),[0 pi])

%ans



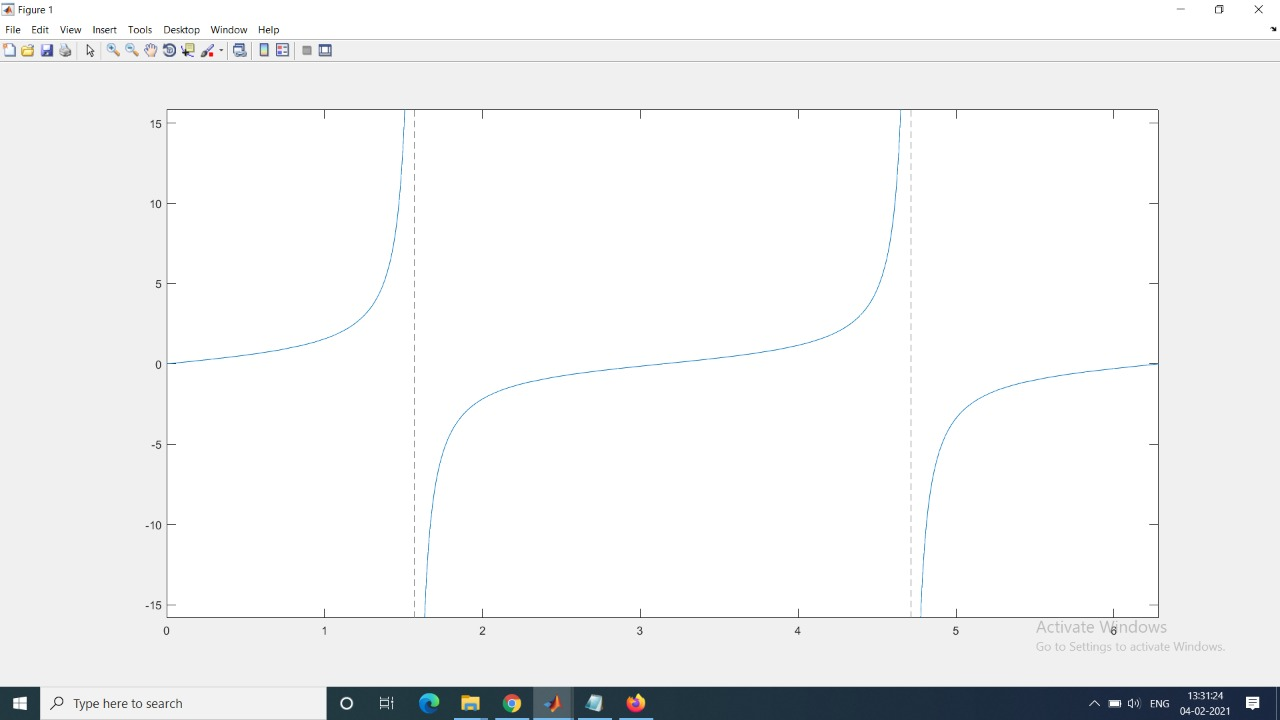
>> fplot(@(x) cos(x),[0 pi])

%ans



>> fplot(@(x) tan(x),[0 2\*pi])

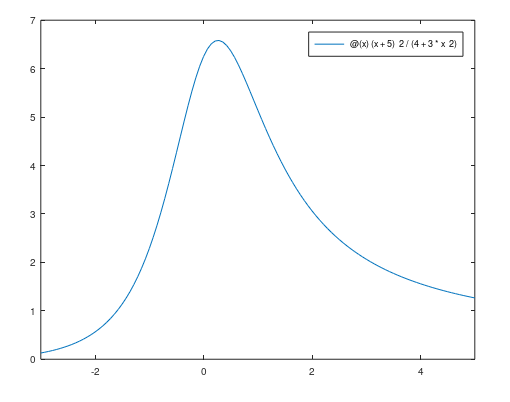
%ans



%6)

>> fplot(@(x)(x+5)^2/(4+3\*x^2),[-3,5])

%ans



%7) diff

>> x = linspace(-2,4);

>> y = 3\*power(x,3)-26\*x+10;

>> f1x = diff(y);

>> f2x = diff(f1x);

>> vec\_1 = x(1:end-1);

>> vec\_2 = x(1:end-2);

>> plot(x,y,vec\_1,f1x,vec\_2,f2x)

>>x=-2:0.01:4;

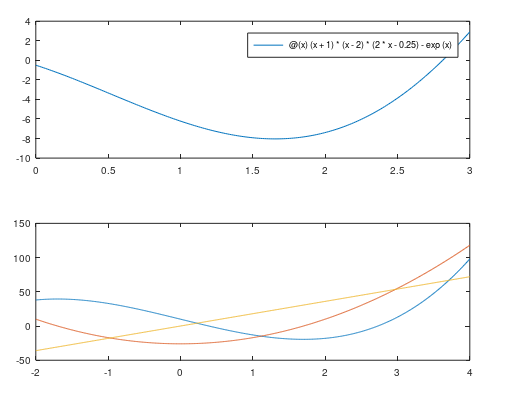
>>y=3\*x.^3 - 26\*x + 10;

>>yd=9\*x.^2 - 26;

>>ydd=18\*x;

>>plot(x,y,x,yd,x,ydd)

%ans



%8) diff

>> x = linspace(-2,4);

>> y = 3\*power(x,3)-26\*x+10;

>> f1x = diff(y);

>> f2x = diff(f1x);

>> vec\_1 = x(1:end-1);

>> vec\_2 = x(1:end-2);

>> plot(x,y);

>> hold on

>> plot(vec\_1,f1x)

>> hold on

>> plot(vec\_2,f2x)

>> hold off

>>x=-2:0.01:4;

>>y=3\*x.^3 - 26\*x + 10;

>>yd=9\*x.^2 - 26;

>>ydd=18\*x;

>>plot(x,y)

>>hold on

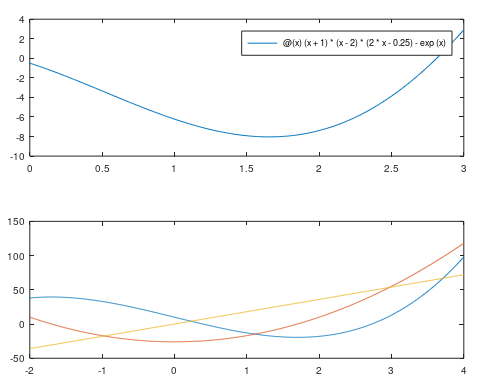
>>plot(x,yd)

>>hold on

>>plot(x,ydd)

>>hold off

%ans)



%9)

>> x = linspace(-2,4);

>> y = 3\*power(x,3)-26\*x+10;

>> vec\_1 = x(1:end-1);

>> vec\_2 = x(1:end-2);

>> f1x = diff(y);

>> f2x = diff(f1x);

>> vec\_1 = x(1:end-1);

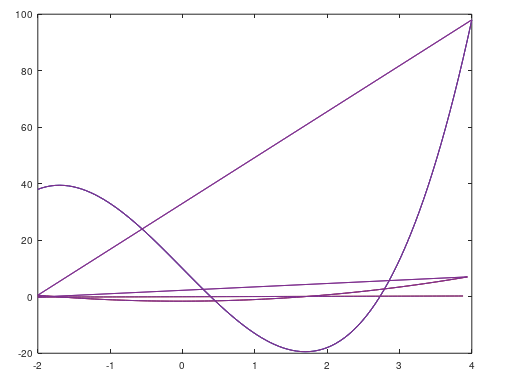
>> vec\_2 = x(1:end-2);

>> x1=[x vec\_1 vec\_2];

>> z=[y f1x f2x]

>> line(x1,z)

%ans)



%10)

>>x=10:0.1:22;

>>y=95000./x.^2;

>>xd=10:2:22;

>>yd=[950 640 460 340 250 180 140];

>>plot(x,y,'-','LineWidth',1.0)

>>xlabel('DISTANCE (cm)')

>>ylabel('INTENSITY (lux)')

>>title('Light Intensity as a Function of Distance','FontSize',14)

>>axis([8 24 0 1200])

>>text(14,600,'Comparison between theory and >>experiment.','EdgeColor','r','LineWidth',2)

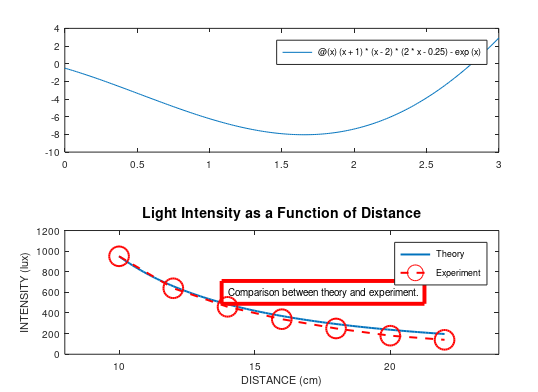
>>hold on

>>plot(xd,yd,'ro--','linewidth',1.0,'markersize',10)

>>legend('Theory','Experiment')

>>hold off

%ans)



%11)

>> x = 1:0.01:10;

>> subplot(2, 2, 1);

>> plot(x, x.^2)

>> subplot(2, 2, 2);

>> plot(x, x.^3)

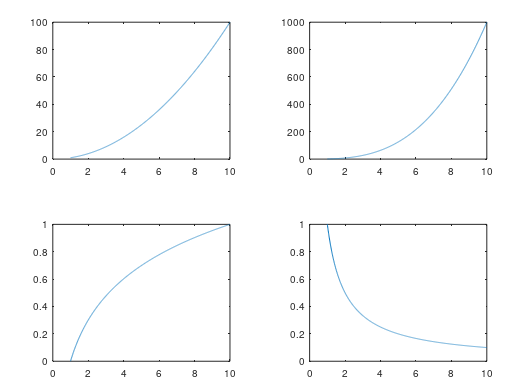
>> subplot(2, 2, 3);

>> plot(x, log10(x))

>> subplot(2, 2, 4);

>> plot(x, 1./x)

%ans)



%12)

y = @(x)(x+1)\*(x-2)\*(2\*x-0.25) - exp(x);

subplot(2,1,1);

fplot(y,[0 3]);

subplot(2,1,2);

fplot(y,[-3 6])

%ans)

