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COURSE: B.Sc(hons.)Physics

ROLL NO.: 81

**SOURCE:**

clc;

clear;

clf;

k=input("no. of order of functions=")

n=0

while n<k

x=poly(0,'x')

a=factorial(n)

b=1/((2.^n)\*a)

d=(x^2-1)^n

if(n>0) then

for i=1:1:n

z=derivat(d)

d=z

end

end

p=d\*b

p=pol2str(p)

x=pol2str(x)

disp("P["+string(n)+"]= "+string(p))

x=-1:0.01:1

r=eval(p)

if(n==0)

r=ones(x)

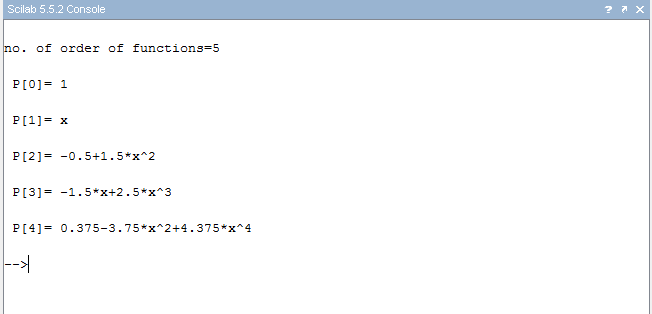
end

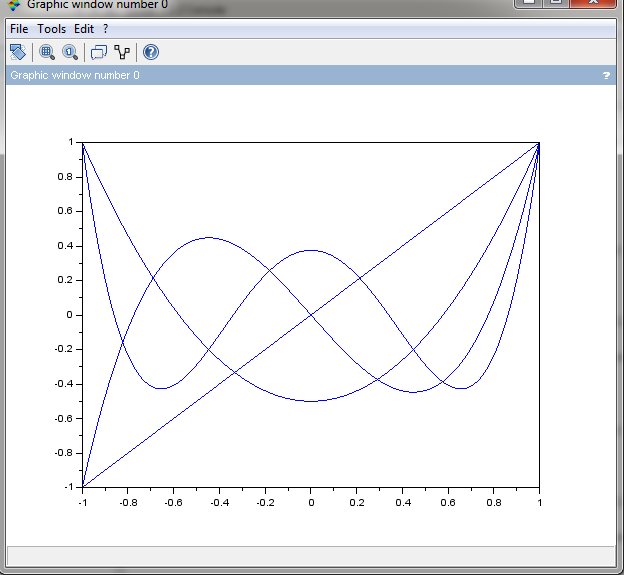
plot(x,r)

n=n+1

end

**OUTPUT:**

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