

```

% Convolution without using the conv(x,h) function With Graph
% Adam Frey

clc;

close all

clear all

x=input('Enter x: ') % in vector form : [ x0 x1 x2...]
h=input('Enter h: ')

a=length(x);           %displays length of x vector
b=length(h);

X=[x,zeros(1,b)];      %displays x vector followed by b many zeros
H=[h,zeros(1,a)];

for p=1:b+a-1
Y(p)=0;                %setting constraints
for q=1:a
if(p-q+1>0)
Y(p)=Y(p)+X(q)*H(p-q+1); %main part of conv(x,h)
else
end
end
end

Y

stem(Y); ylabel('Y[n]'); xlabel('n==>'); grid on;
title('Convolution without using the function conv(x,h)');
YY = conv(x,h)         % shows it works

```