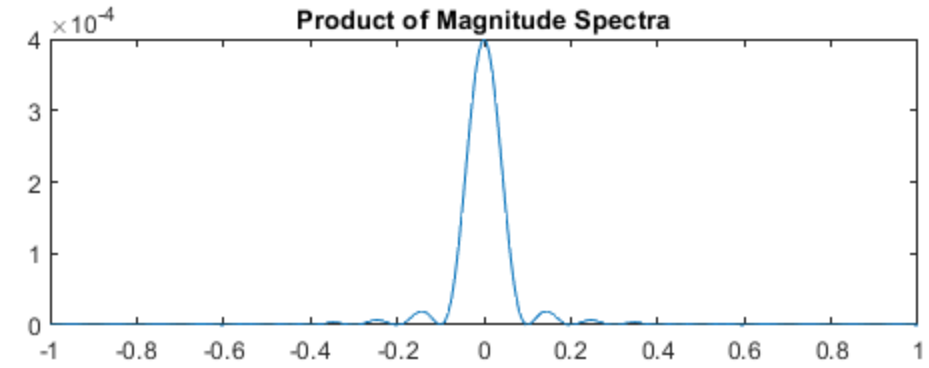
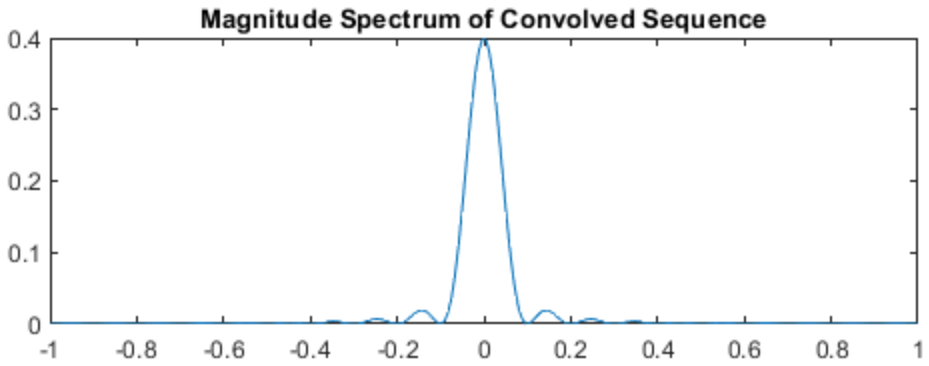
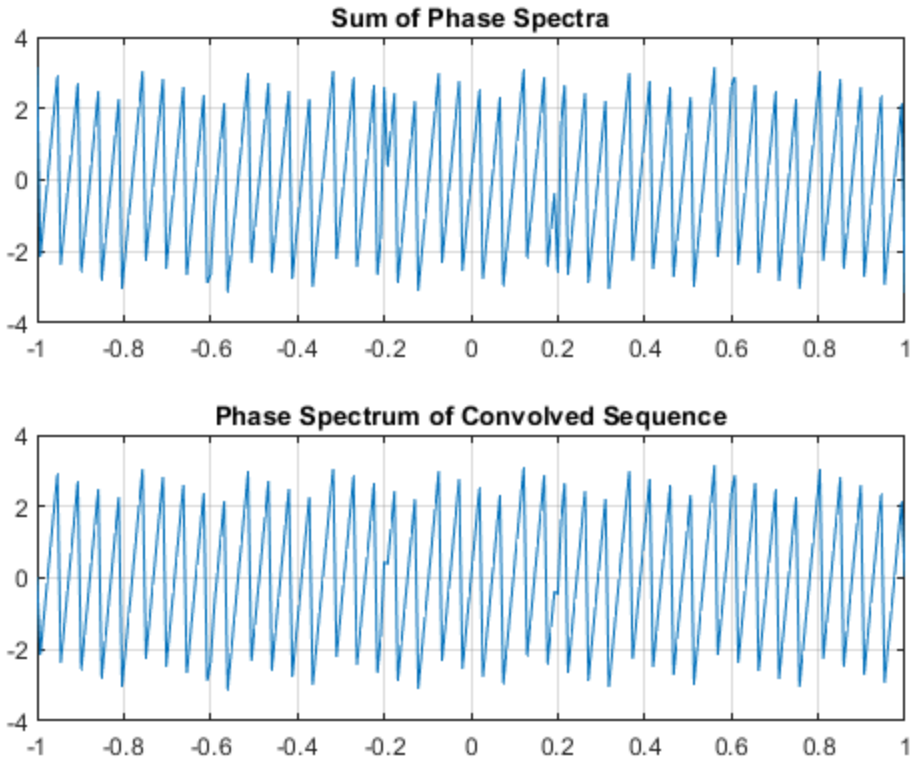
```
precede = zeros(1,500);
trail = zeros(1,500);
signal_x = ones(1,1000);
dt = 1e-3;
x = [precede signal_x trail]; % Signal x(t)
w = -pi:2*pi/255:pi; % Designated frequencies (rad/sample)
y = conv(x,x);
Xf = freqz(x,1,w).*dt;
Mult = Xf.*Xf;
figure
subplot(2,1,1)
plot(w/pi,abs(Mult));
title('Product of Magnitude Spectra')
Convol = freqz(y,1,w).*dt;
subplot(2,1,2)
plot(w/pi,abs(Convol));
title('Magnitude Spectrum of Convolved Sequence')
figure
subplot(2,1,1)
plot(w/pi,angle(Mult));grid
title('Sum of Phase Spectra')
subplot(2,1,2)
plot(w/pi,angle(Convol));grid
title('Phase Spectrum of Convolved Sequence')
```







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