```matlab
%2020UCO1505
%VERIFICATION OF SHIFTING PROPERTY OF FOURIER TRANSFORM
close all;
clear;
clc;
sf=10e1;
dt=1/sf;
t=-100:dt:100;
x=10*sinc(10*t);
ft=fft(x);
N=length(ft);
n=-(N-1)/2:(N-1)/2;
w=2*pi*n/N/dt;
sft=ft.*exp(-1i*w*0.5);
y=ifft(sft);
ft=ft.*dt;
sft=sft.*dt;
subplot(2,2,1);
plot(t,abs(x));
axis([-1 1 -5 15]);
xlabel('time');
ylabel('amplitude');
title('10sinc(100)');
grid on;
subplot(2,2,2);
plot(w,fftshift(abs(ft)));
axis([-70 70 -2 3]);
xlabel('angular frequency')
ylabel('amplitude');
title('F.T. of 10sinc(10t)');
grid on;
subplot(2,2,3);
plot(t,abs(y));
axis([-1 1 -5 15]);
xlabel('time');
ylabel('amplitude');
title('shifted 10sinc(10t)');
grid on;
subplot(2,2,4);
plot(w,fftshift(abs(sft)));
axis([-70 70 -2 3]);
xlabel('angular frequency')
ylabel('amplitude');
title('Inverse FT of shifted 10sinc(10t)');
grid on;
```
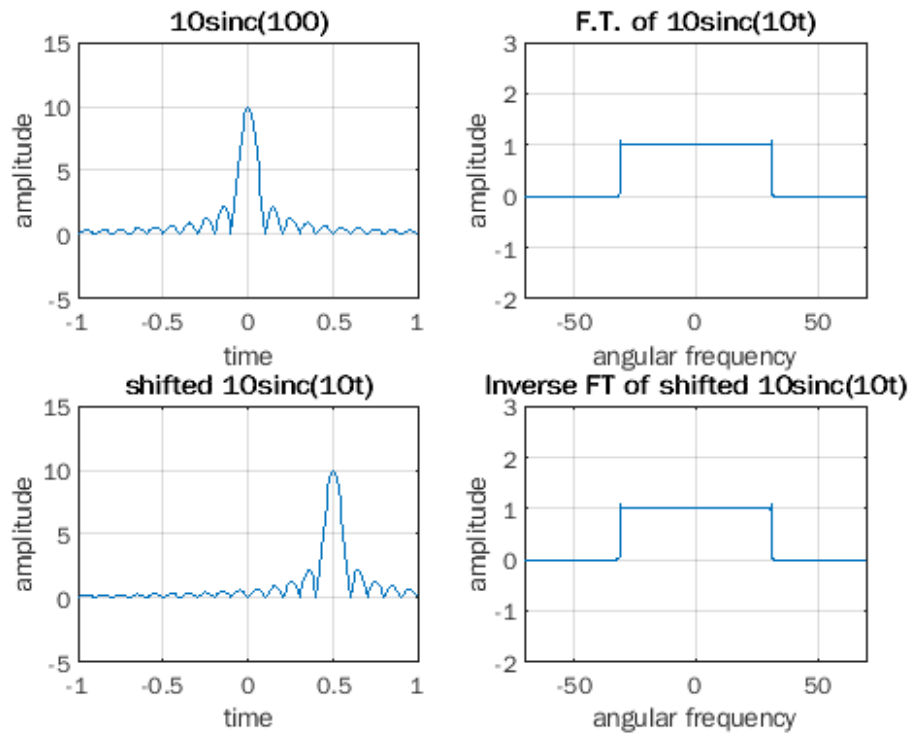
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