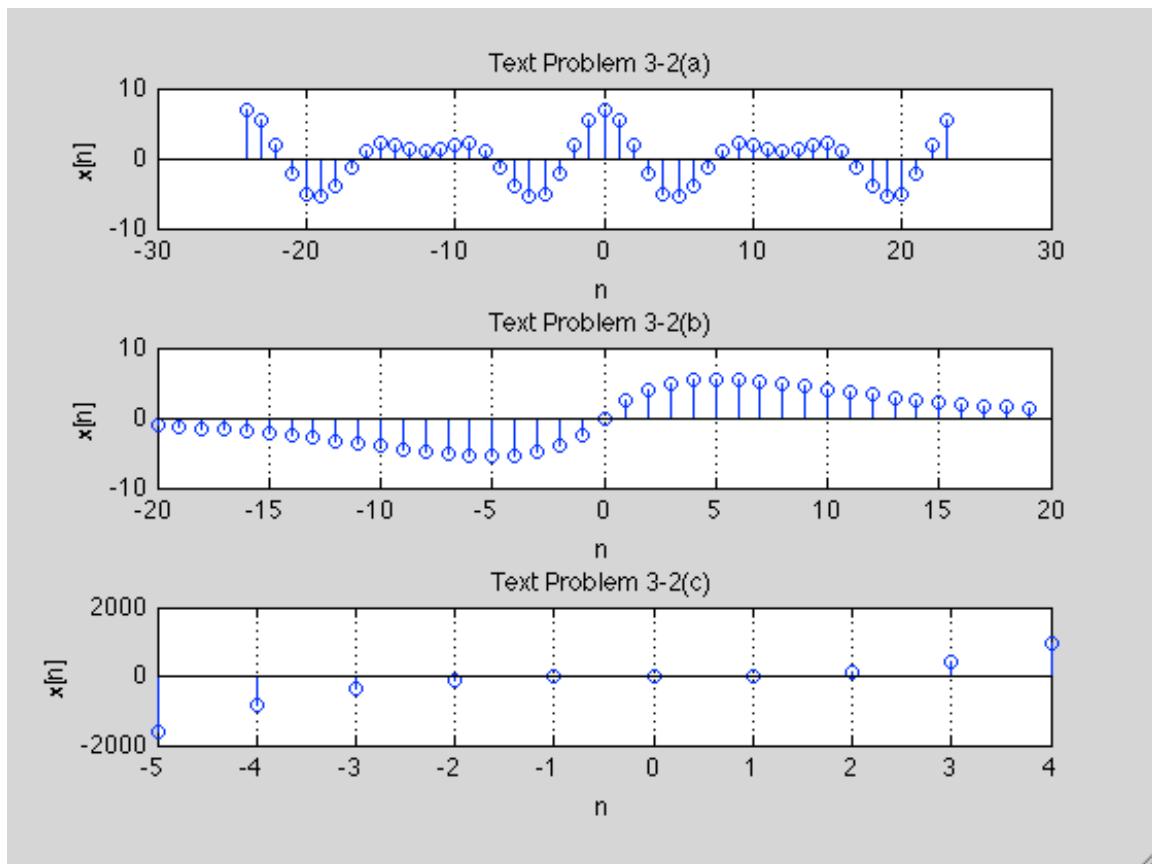


EE322 Fall 2012 PS09 Solutions

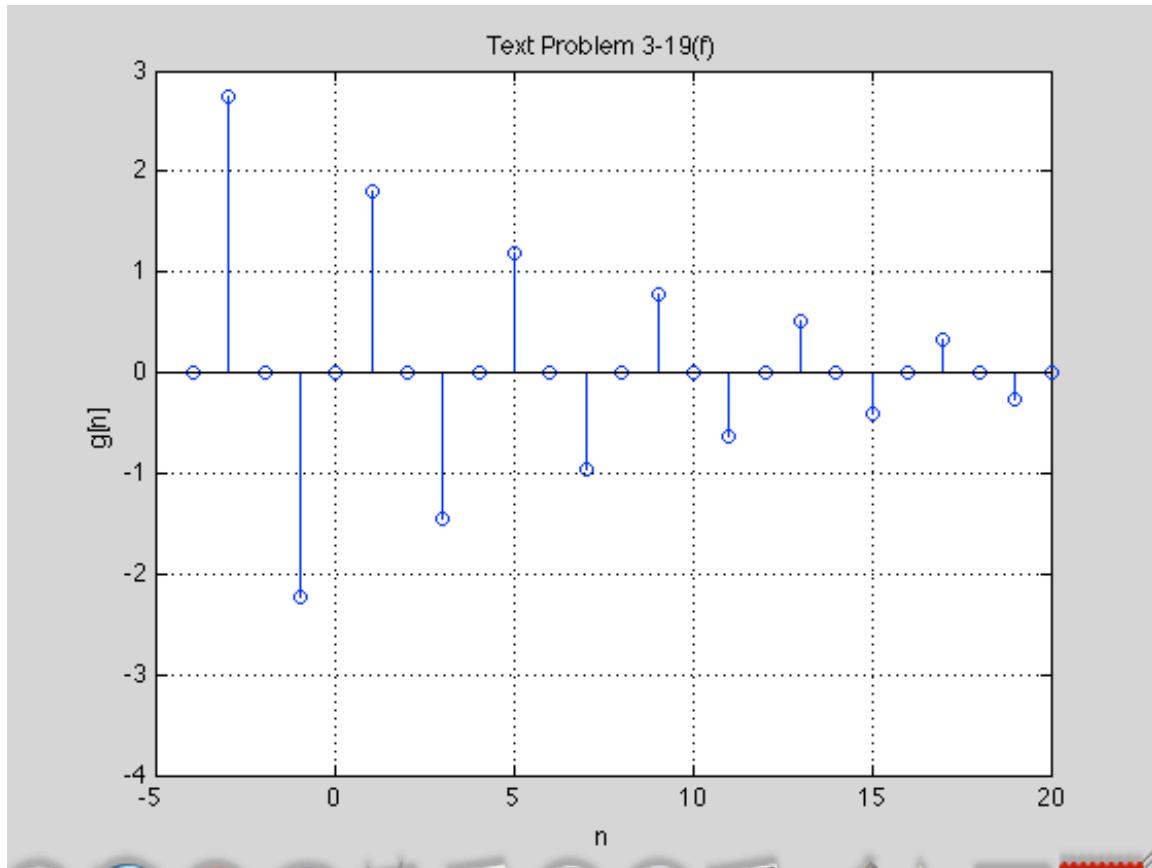
```
% 1. Text, Problem 3-2
% (a)
n=-24 : 23; % since -24 <= n < 24
x = 4*cos(2*n*pi/12) - 3*sin(2*pi*(n-2)/8);
figure(1), subplot(3,1,1), stem(n,x), xlabel('n'), ylabel('x[n]')
')
title('Text Problem 3-2(a)'), grid on

% (b)
n=-20 : 19; % since -20 <= n < 20
x = 3*n.*exp(-abs(n/5));
figure(1), subplot(3,1,2), stem(n,x), xlabel('n'), ylabel('x[n]')
')
title('Text Problem 3-2(b)'), grid on

% (c)
n=-5 : 4; % since -5 <= n < 5
x = 21*(n/2).^2 + 14*n.^3;
figure(1), subplot(3,1,3), stem(n,x), xlabel('n'), ylabel('x[n]')
')
title('Text Problem 3-2(c)'), grid on
```



```
% 2. Text, Problem 3-19f
n=-5 : 20;
g = 2*(0.9).^n .* sin(2*pi*n/4);
figure(2),stem(n,g),xlabel('n'),ylabel('g[n]')
title('Text Problem 3-19(f)'),grid on
```



```
% 3. Text, Problem 3-23b
k=-200 : 200;
G = 20*cos(2*pi*k/8).* sinc(k/40);
mag=abs(G);
ph=angle(G)*180/pi;
figure(3),subplot(2,1,1),stem(k,mag),xlabel('k'),ylabel('|G[k]|')
title('Text Problem 3-23(b)'),grid on
subplot(2,1,2),stem(k,ph),xlabel('k'),ylabel('Phase of G[k] (deg)'),grid on
```

