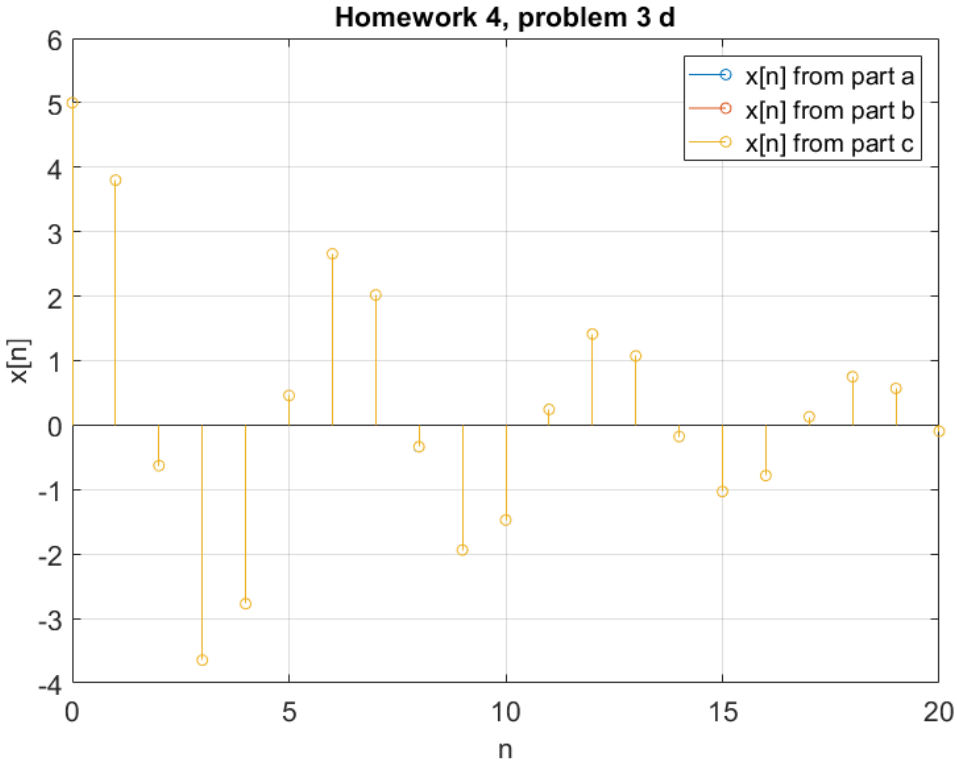
```
% Author: Spencer Goulette
% ECE 486 - HW #4 Problem 3 d
% February 18th, 2019

clear variables
```

Problem 3 d

```
n = linspace(0,20,21); % n
x1 = 2 .* 2.6905 .* (0.9).^n .* cos(pi .* n ./ 3 - 0.3785); % x[n]
 from part a
x2 = 31 * sqrt(3) / 27 .* (0.9).^n .* sin(pi .* n ./ 3) + 5 .*
 (0.9).^n .* cos(pi .* n ./ 3); % x[n] from part b
x3 = 100 * sqrt(3) / 27 * (0.9).^(n + 1) .* sin(pi .* (n + 1) ./ 3) -
 14 * sqrt(3) / 27 .* (0.9).^(n) .* sin(pi .* n ./3); % x[n] from part
 c

Fig1 = figure('Position', [200, 75, 850, 600]); % set figure size and
 location
stem(n,x1); % stem plot
hold on; % hold on plotting
stem(n,x2); % stem plot
stem(n,x3); % stem plot
grid on; % add grid
set(gca, 'fontsize', 16); % increase font size
xlabel('n', 'fontsize', 16); % x label
ylabel('x[n]', 'fontsize', 16); % y label
title('Homework 4, problem 3 d', 'fontsize', 16); % title
legend('x[n] from part a','x[n] from part b','x[n] from part c'); %
 legend
```



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