

# Samples for ELEC342 Lab Test

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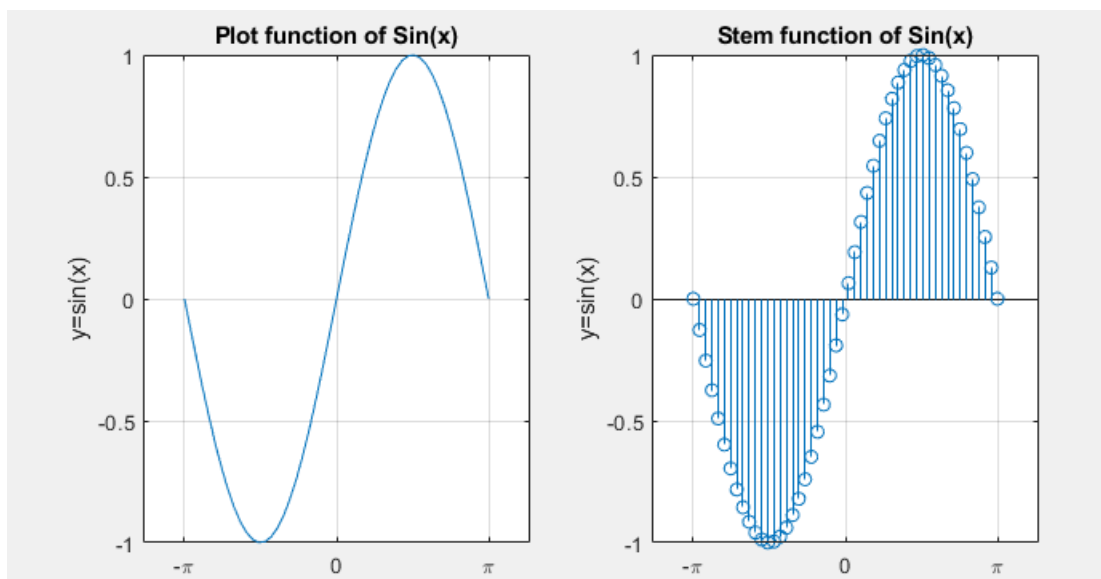
## Example 1: Using `plot()` and `stem()`

**Question:** drawing a graph of  $y = \sin(x)$  using `stem`, which displays the discrete values of the points on the curve.

**Simple code:**

```
clc
clear all
close all
x = linspace(-pi,pi,50);
y = sin(x);
subplot(1,2,1)
plot(x,y)
xticks([ -pi 0 pi ])
xticklabels({'-\pi','0','\pi'})
title('Plot function of Sin(x)')
grid on
subplot(1,2,2)
stem(x,y)
xticks([ -pi 0 pi ])
xticklabels({'-\pi','0','\pi'})
title('Stem function of Sin(x)')
% xlabel(''),
grid on
```

The output of this code:



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*Example 2: Using plot() and stem()*

**Question: Plotting a signal  $\sin(2\pi f t)$  and obtaining a discrete periodic signal.**

Sample code shows how to graph continuous signal, and stem to graph discrete signal.

```
clc
clear all
close all
t = 0:6e-2:1;
signal = sin(2*pi*t);

%graph continuous signal
subplot(2,1,2)
plot(t,signal)
xlabel('t')
ylabel('y=sin(t)')
grid on

%graph discrete signal
subplot(2,1,1)
stem(t,signal)
xlabel('t')
ylabel('y=sin(N)')
grid on
```

The output of this code:

