

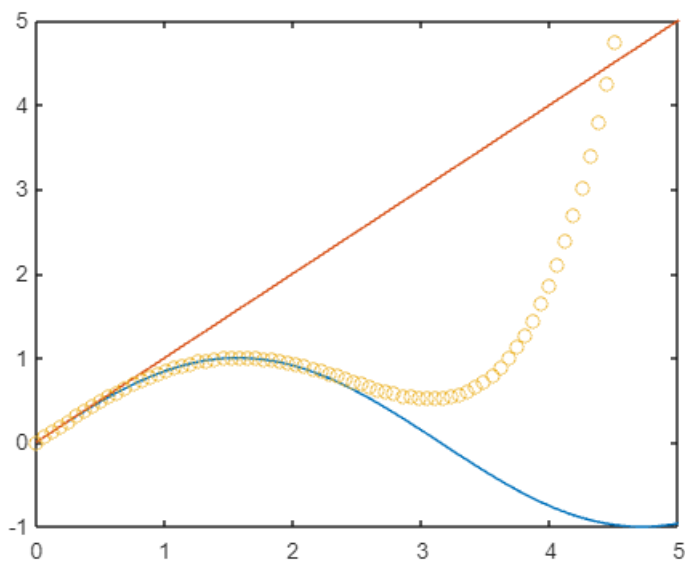
Experiment 2: Multivariate Visualization

Color Style-option	Line Style-option	Marker Style-option
y yellow	- solid	+ plus sign
m magenta	-- dashed	o circle
c cyan	: dotted	* asterisk
r red	-. dash-dot	x x-mark
g green	none no line	. point
b blue		^ up triangle
w white		s square
k black		d diamond, etc.

1).

```
x=linspace(0,2*pi,100);  
y=sin(x);  
plot(x,y)  
hold on  
z=x;  
plot(x,z)  
m=x-(x.^3)/6+(x.^5)/120;  
plot(x,m,'o')  
axis([0 5 -1 5])  
hold off
```

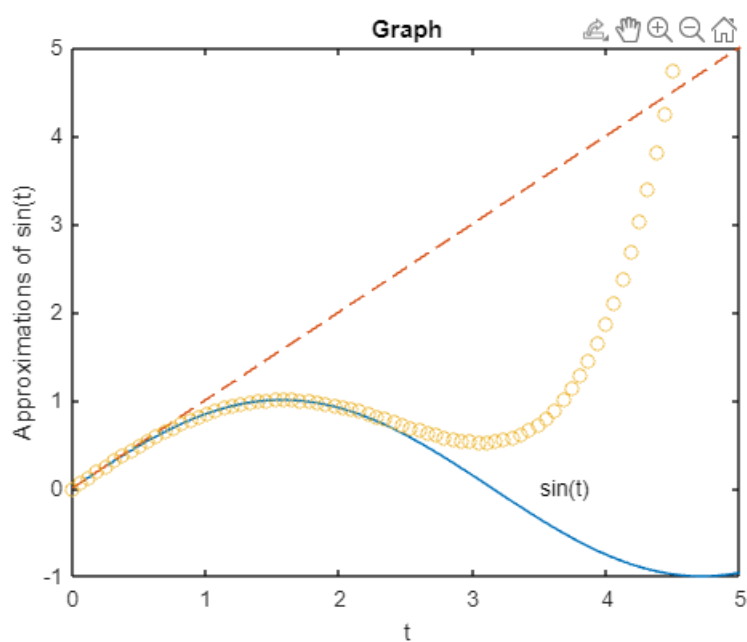
Output:



2).

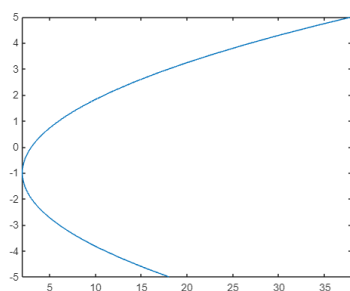
```
t=linspace(0,2*pi,100)
y=sin(t);
z=t;
m=t-(t.^3)/6+(t.^5)/120;
plot(t,y,t,z,'--',t,m,'o')
axis([0 5 -1 5])
xlabel('t')
ylabel('Approximations of sin(t)')
title('Graph')
text(3.5,0,'sin(t)')
```

Output:



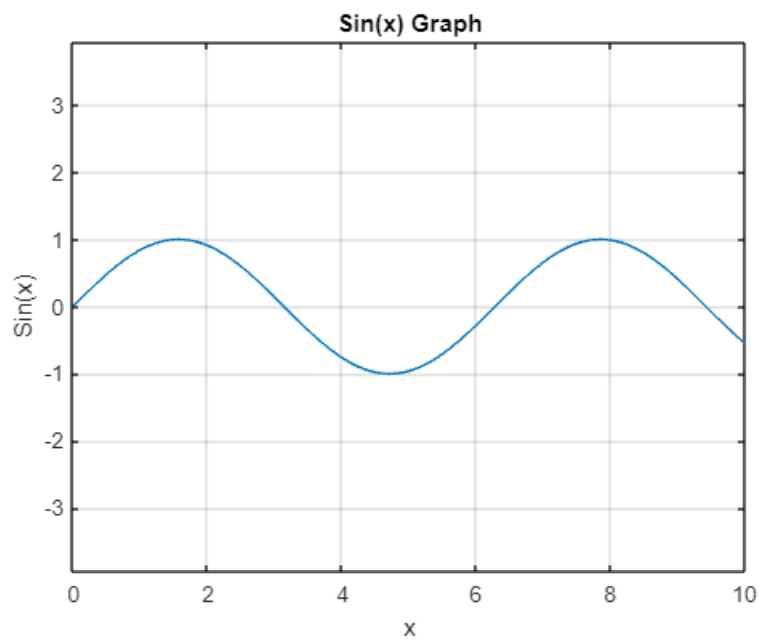
3.) 'fplot' command plots a function between specified limits. Provided 'x' limits, it will automatically take y values.

```
syms x
f=x^2+2*x+3;
fplot(f,x)
```



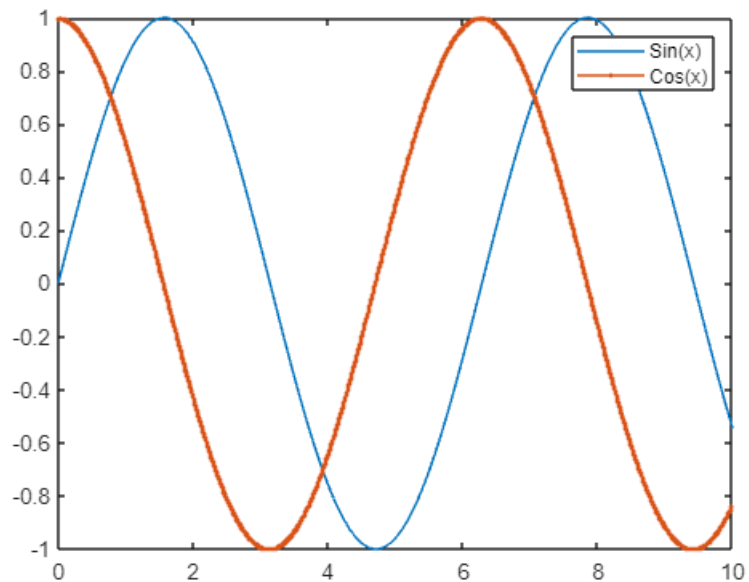
4.

```
x = [0:0.01:10];
y = sin(x);
plot(x, y), xlabel('x'), ylabel('Sin(x)'), title('Sin(x) Graph'),
grid on, axis equal
```



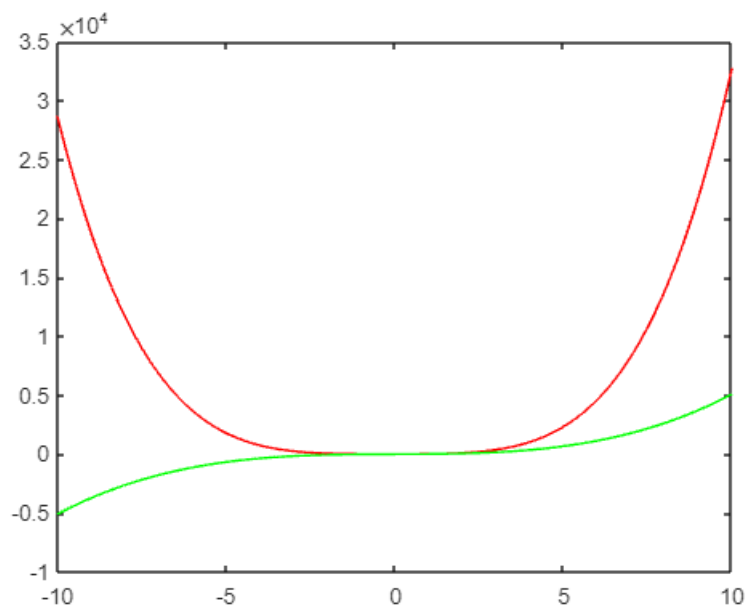
5.

```
x = [0 : 0.01: 10];
y = sin(x);
g = cos(x);
plot(x, y, x, g, '-.-'), legend('Sin(x)', 'Cos(x)')
```



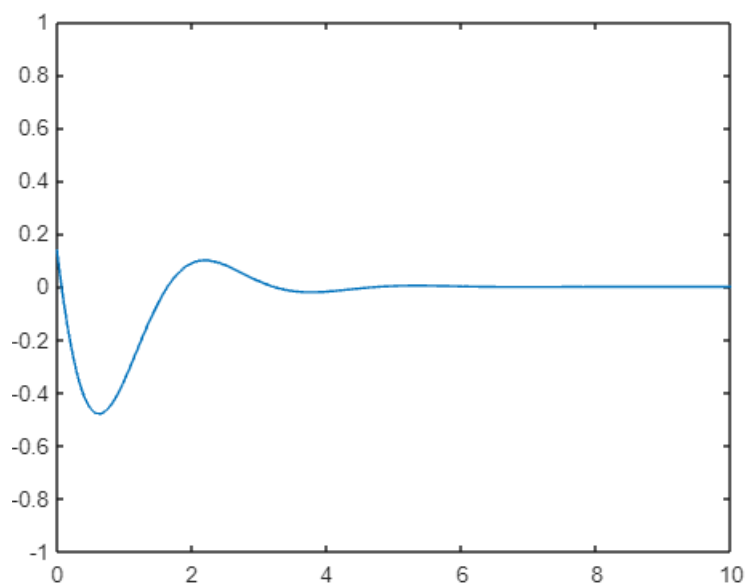
6.

```
x = [-10 : 0.01: 10];
y = 3*x.^4 + 2 * x.^3 + 7 * x.^2 + 2 * x + 9;
g = 5 * x.^3 + 9 * x + 2;
plot(x, y, 'r', x, g, 'g')
```



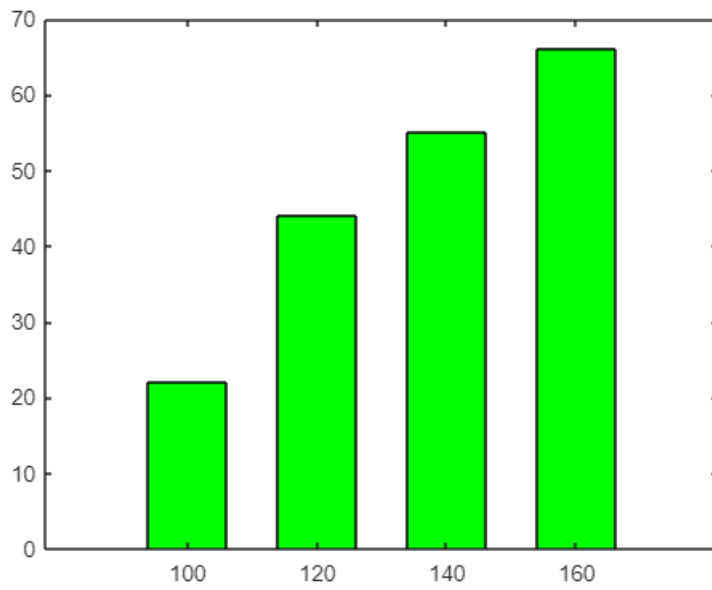
7.

```
x = [0 : 0.01 : 10];
y = exp(-x).* sin(2*x + 3);
plot(x, y), axis([0 10 -1 1])
```



8.

```
x=100:20:160;
y=[22 44 55 66];
bar(x,y,0.6, "green");
```



9. Retain current plot when adding new plots

```
x = linspace(-pi,pi);  
y1 = sin(x);  
plot(x,y1)  
hold on  
y2 = cos(x);  
plot(x,y2)  
hold off
```

