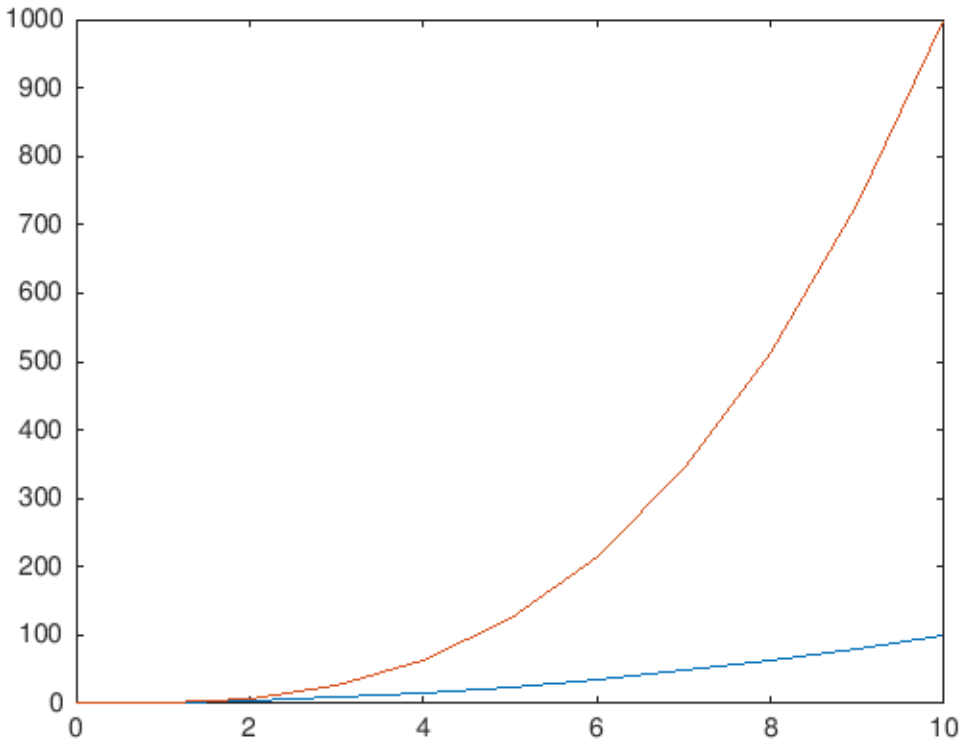
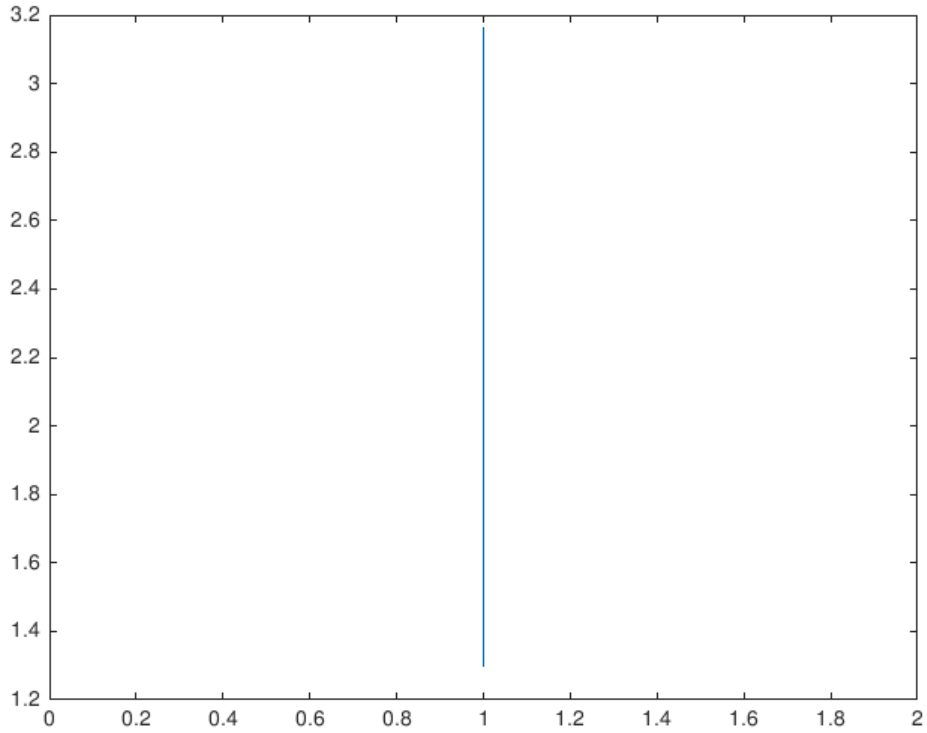
```
% Ploting graph

x = 0:1:10
y = x.^2

plot(x,y)

%Title, X-label, Y-label


%More than one function

y1 = x.^3

%Method 1
plot(x,y,x,y1)


%Method 2
%plot(x,y)
%hold(on)
%plot(x,y1)
%hold(off)



%Multiple figures

figure(1);
a = [1 + 1i, 1 + 2i]
b = sin(a)

plot(a,b)

%different color and shapes
figure(2)
plot(x,y,x,y1, 'r-.*')


%plotting individual data points
figure(3)
x1 = 1:1:10
y1 = 1:2:20
plot(x1,y1,'o')

%different axis limits
% axix()


%adding text
figure(4)
plot(x1,y1)
```

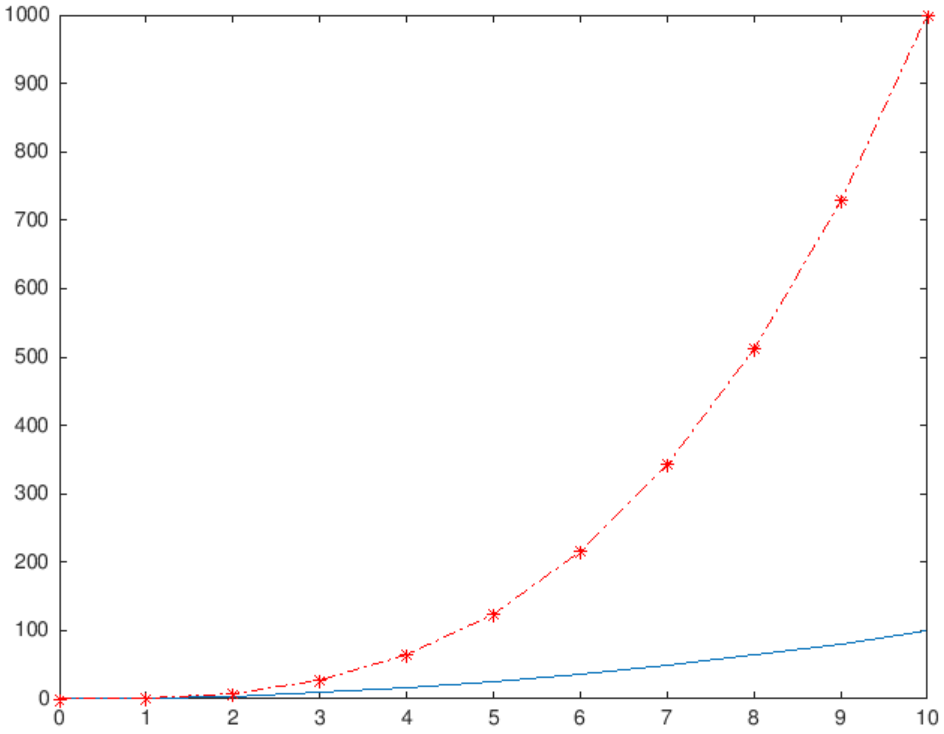
```
%text()


%Adding legends on the lines
figure(5)
plot(x1,y1, x ,y)
legend('Line 1', 'Line 2 ')



%Including special characters
figure(6)
theta = -pi:0.01:pi;
y = sin(theta);
plot(theta, y)



%Exercises
figure(7)

x = -10 : 1 : 10
y1 = (x.^2)- (2.*x) + 3
y2 = (-x.^3) + (3.*x) + (1./x)

plot(x, y1, 'd-g', x, y2,'--cX')
legend('Y1 = (x.^2)- (2.*x) + 3', 'Y2 = (-x.^3) + (3.*x) + (1./x)')

figure(8)

x = -(pi) : (pi./2) : (pi)
y1 = tan(x)
y2 = sin(x).^2

plot(x, y1, x, y2)
legend('y1 = tan(x)', 'y2 = sin(x).^2')


x =

     0     1     2     3     4     5     6     7     8     9    10


y =

     0     1     4     9    16    25    36    49    64    81   100


y1 =

  Columns 1 through 6

           0           1           8          27          64
 125
```

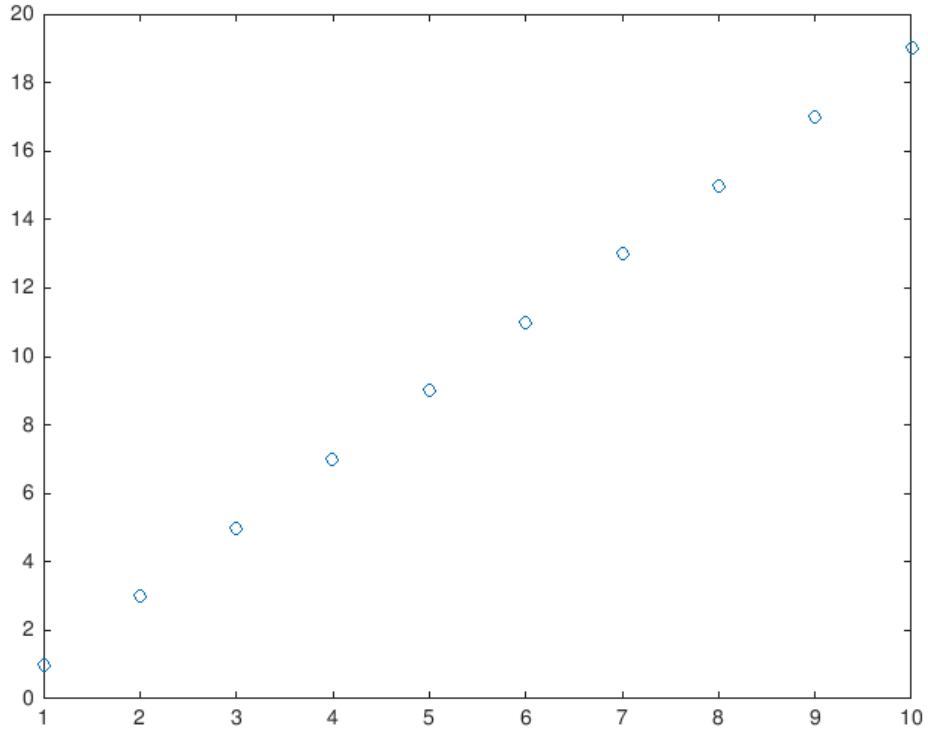
```
  Columns 7 through 11

         216         343         512         729        1000

a =

   1.0000 + 1.0000i   1.0000 + 2.0000i

b =

   1.2985 + 0.6350i   3.1658 + 1.9596i

Warning: Imaginary parts of complex X and/or Y arguments ignored

x1 =

     1     2     3     4     5     6     7     8     9    10

y1 =

     1     3     5     7     9    11    13    15    17    19

x =

  Columns 1 through 13

   -10    -9    -8    -7    -6    -5    -4    -3    -2    -1     0
 1     2

  Columns 14 through 21

     3     4     5     6     7     8     9    10

y1 =

  Columns 1 through 13

   123   102    83    66    51    38    27    18    11     6     3
 2     3

  Columns 14 through 21

     6    11    18    27    38    51    66    83

y2 =

  Columns 1 through 7
```

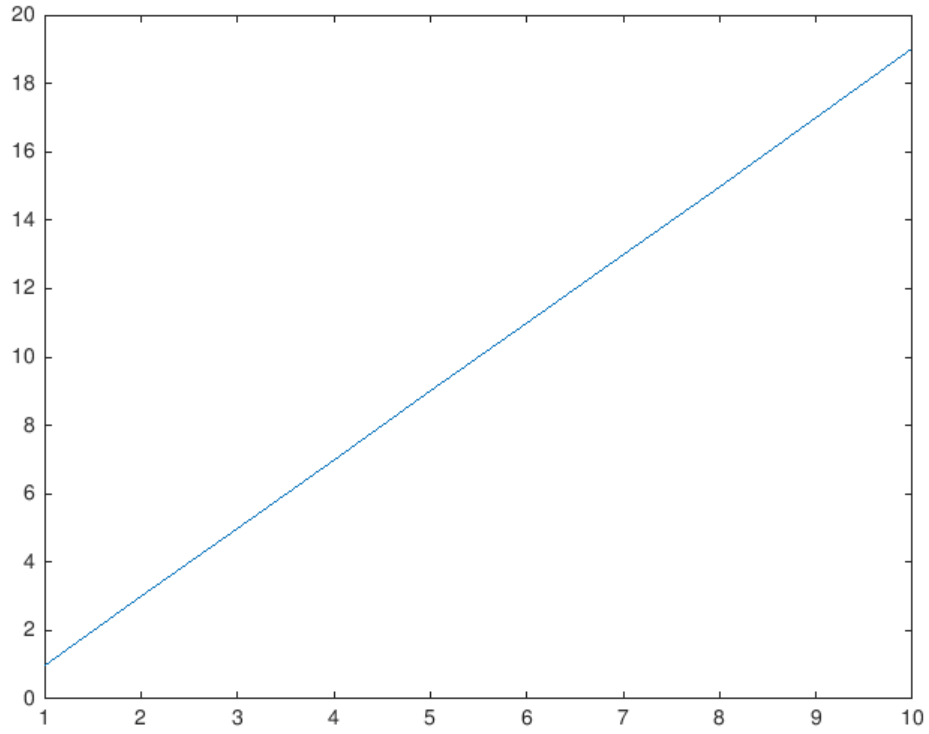
```
  969.9000  701.8889  487.8750  321.8571  197.8333  109.8000   51.7500

  Columns 8 through 14

   17.6667    1.5000   -3.0000       Inf    3.0000   -1.5000  -17.6667

  Columns 15 through 21

  -51.7500 -109.8000 -197.8333 -321.8571 -487.8750 -701.8889 -969.9000

x =

   -3.1416   -1.5708         0    1.5708    3.1416

y1 =

   1.0e+16 *

    0.0000   -1.6331         0    1.6331   -0.0000

y2 =

    0.0000    1.0000         0    1.0000    0.0000
```

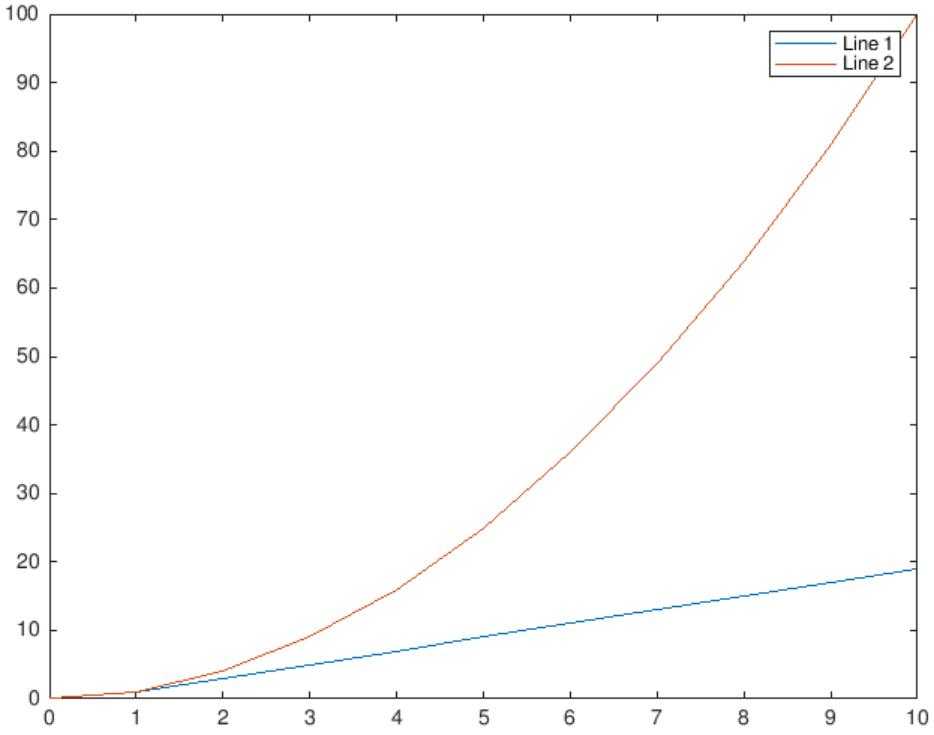

1000
900
800
700
600
500
400
300
200
100
0
0
2
4
6
8
10

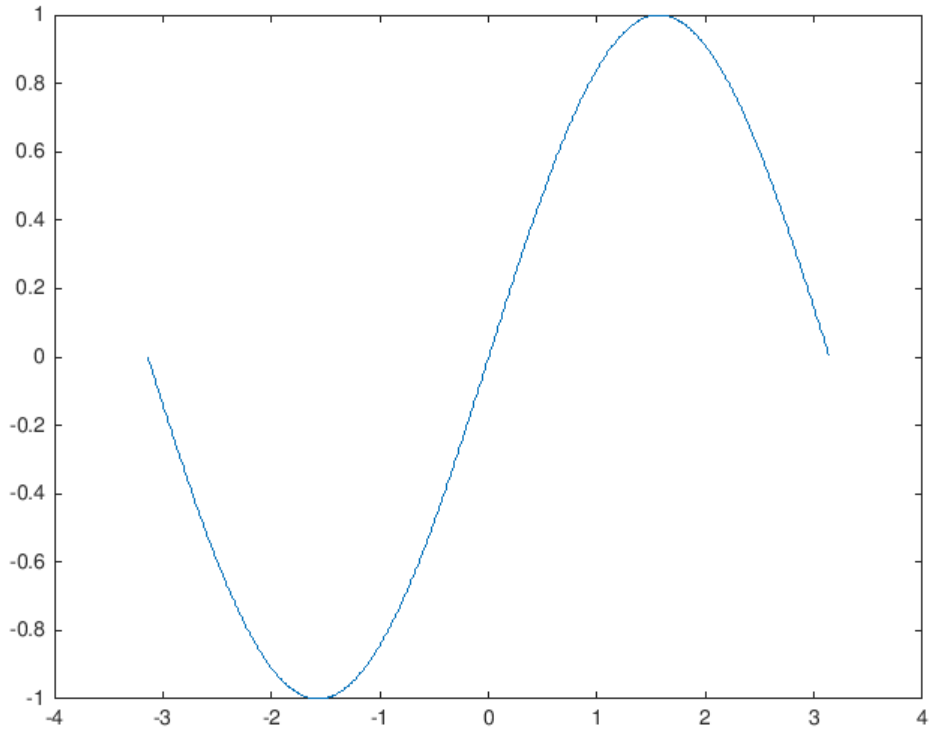

3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

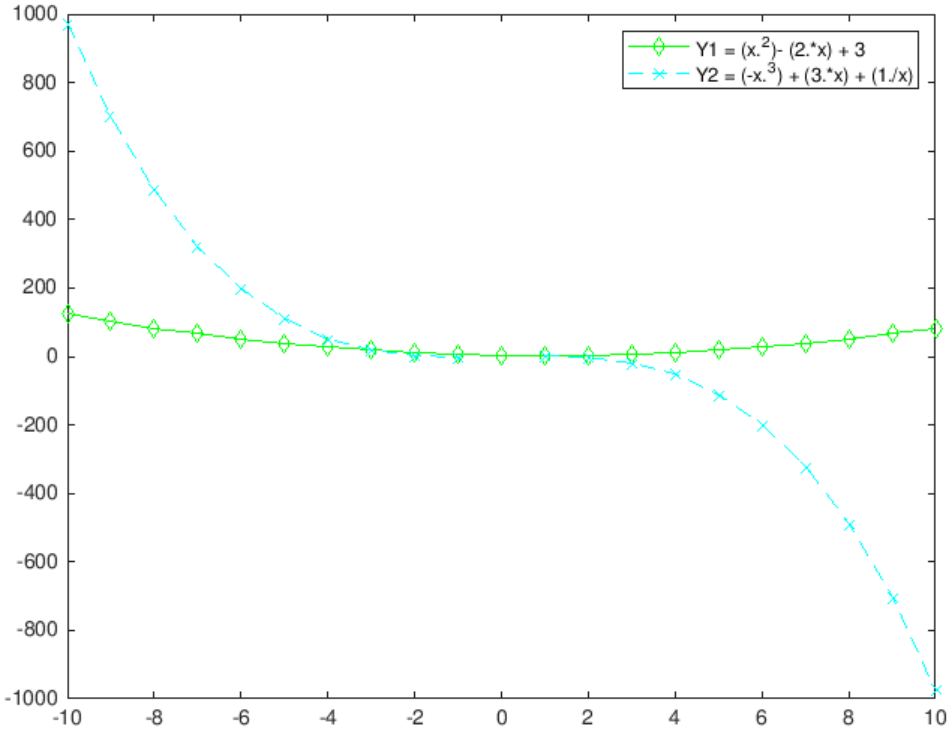

1000
900
800
700
600
500
400
300
200
100
0
0
1
2
3
4
5
6
7
8
9
10

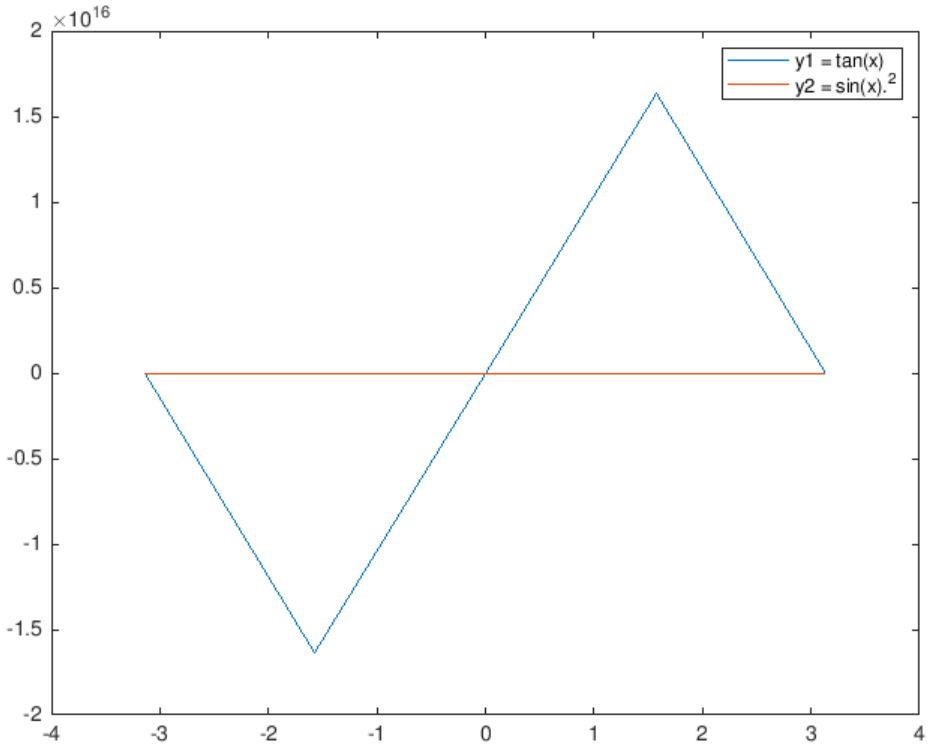

20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
7
8
9
10


20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
7
8
9
10


Line 1
Line 2
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
10


1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-4
-3
-2
-1
0
1
2
3
4


Y1 = (x.^2)- (2.*x) + 3
Y2 = (-x.^3) + (3.*x) + (1./x)
1000
800
600
400
200
0
-200
-400
-600
-800
-1000
-10
-8
-6
-4
-2
0
2
4
6
8
10



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