

```
octave:1> data = [-11, 12, 2, 3, 45, 3, 42, 7, 89, 100, 105, 8, 98, 3, 7, 23, 21, 28, 7, 80, 87, 70, 9,
10, 7, 6];
octave:2> value = mode(data);
octave:3> value
value = 7
octave:4> value = median(data);
octave:5> value
value = 11
octave:6> value = sort(data);
octave:7> value
value =
```

Columns 1 through 17:

-11	2	3	3	3	6	7	7	7	7	8	9	10	12	21	23	28
-----	---	---	---	---	---	---	---	---	---	---	---	----	----	----	----	----

Columns 18 through 26:

42	45	70	80	87	89	98	100	105
----	----	----	----	----	----	----	-----	-----

```
octave:8> value = mean(data);
octave:9> value
value = 33.115
octave:10> value = sum(data);
octave:11> value
value = 861
octave:12> value = min(data);
octave:13> value
value = -11
octave:14> value = max(data);
octave:15> value
value = 105
octave:16>
octave:16>
```



```
octave:23> u
```

$$u =$$
[illegible]

```
octave:24> v = triu(w);
```

```
octave:25> v
```

$$V =$$
[illegible]

```
octave:26> u-v
```

```
ans =
```

[illegible]

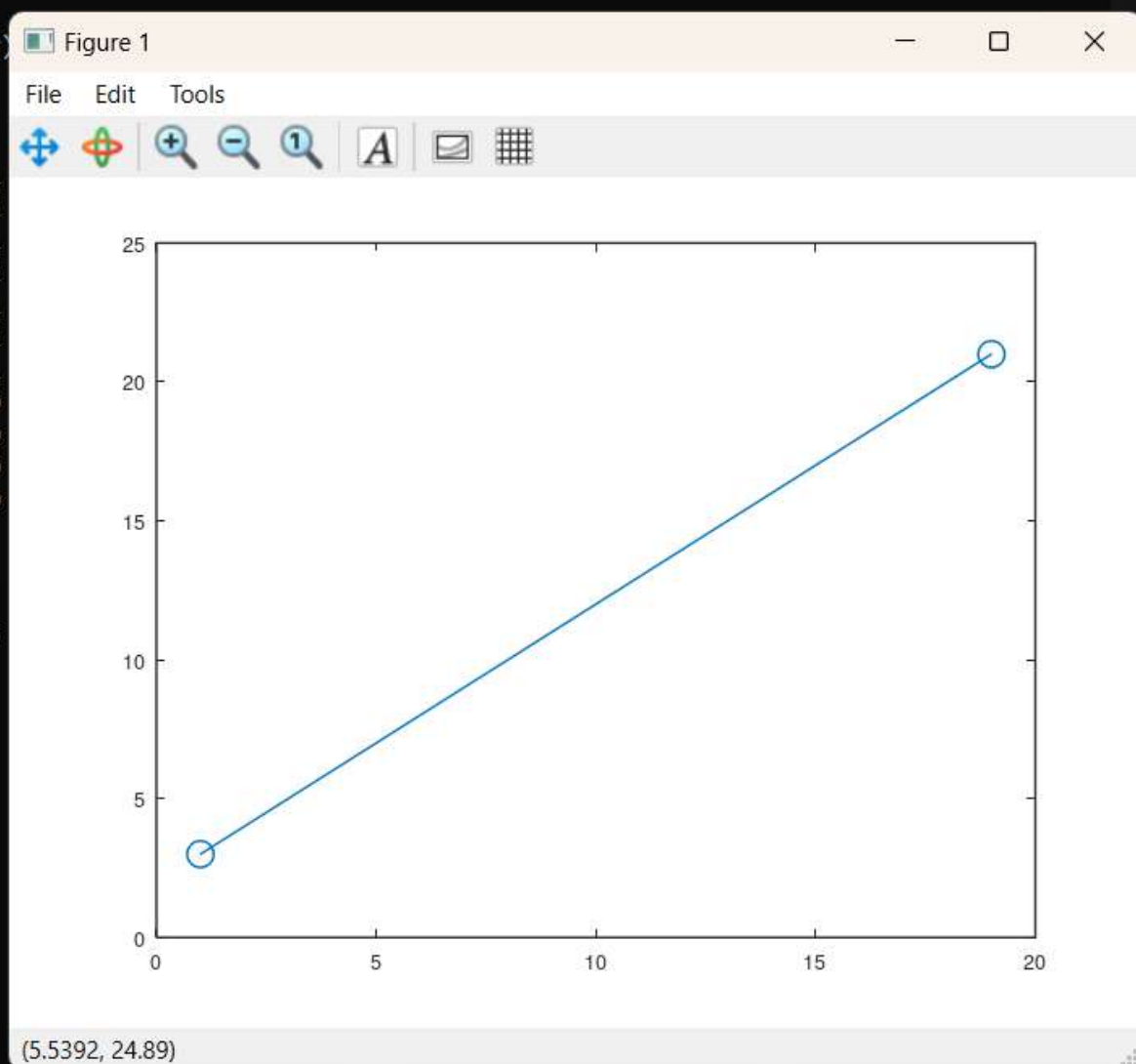
```
octave:27> y = u - v;  
octave:28> sq_y = sqrt(abs(y));  
octave:29> sq_y  
sq_y =
```

[illegible]

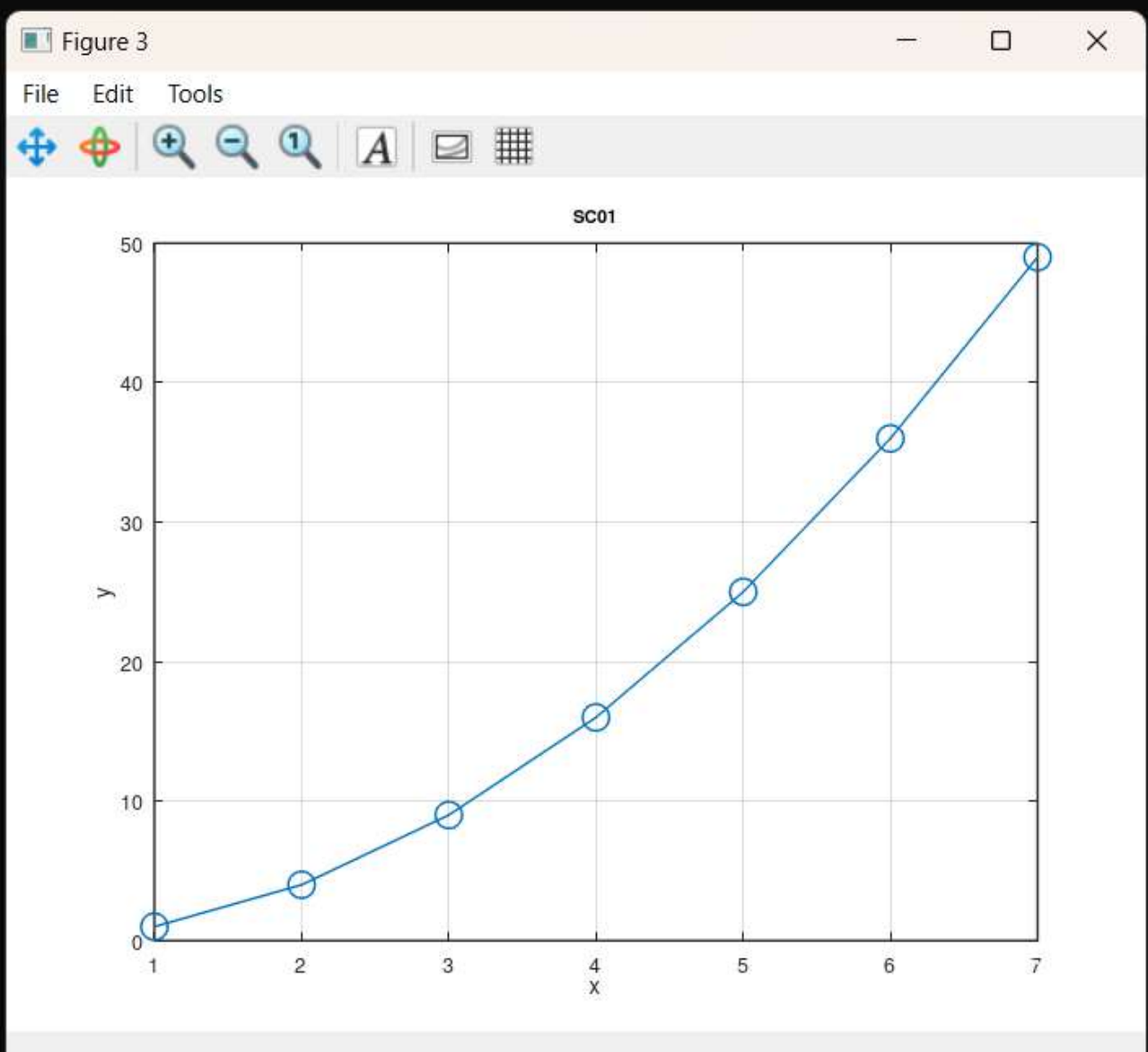
```
octave:27> y = u - v;  
octave:28> sq_y = sqrt(abs(y))  
octave:29> sq_y  
sq_y =
```

```
1 1 1 1 1 1 1  
0 1 1 1 1 1 1  
0 0 1 1 1 1 1  
0 0 0 1 1 1 1  
0 0 0 0 1 1 1  
0 0 0 0 0 1 1  
0 0 0 0 0 0 1  
0 0 0 0 0 0 0  
0 0 0 0 0 0 0  
0 0 0 0 0 0 0  
0 0 0 0 0 0 0
```

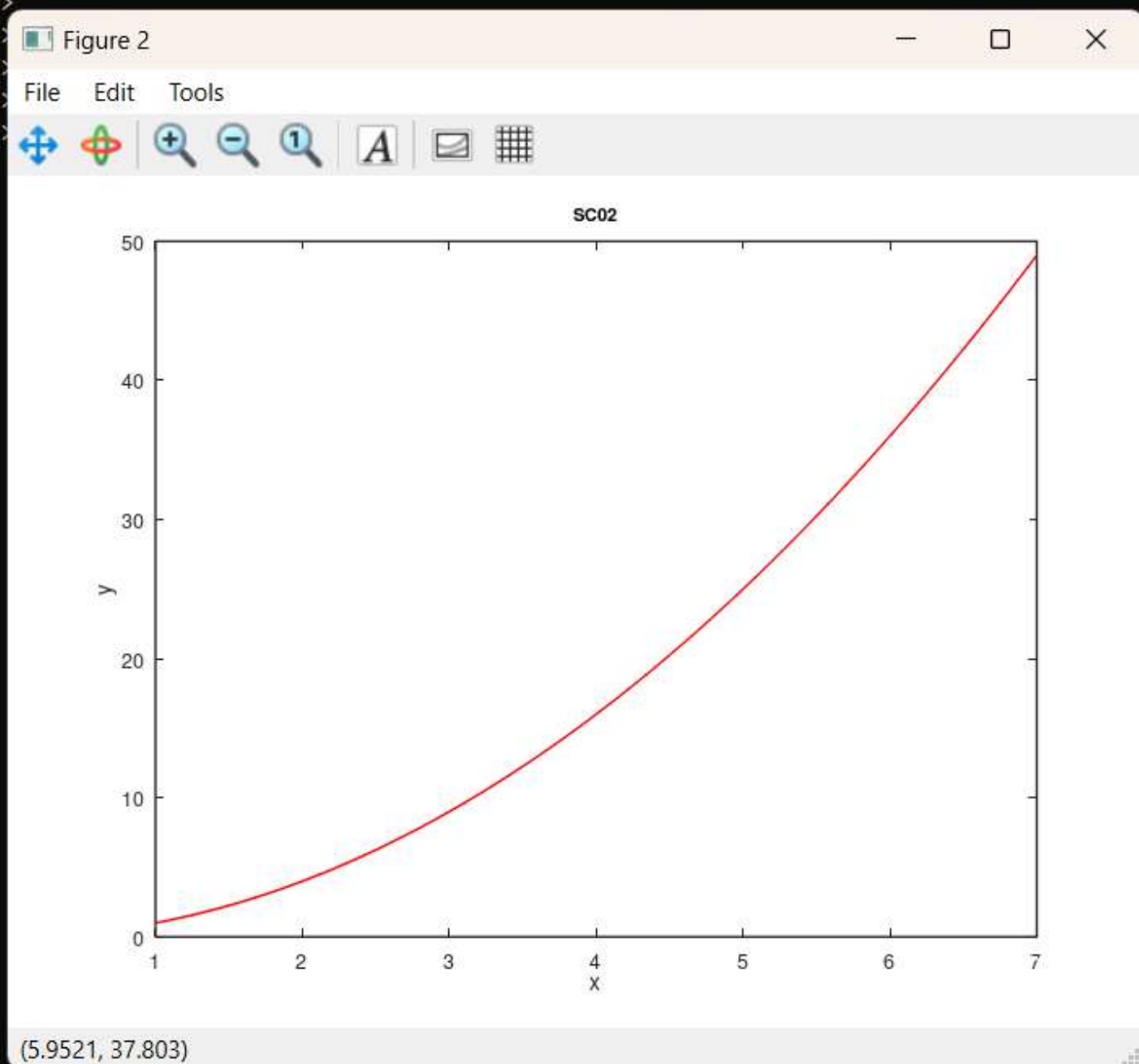
```
octave:30> y = [1, 19];  
octave:31> z = [3, 21];  
octave:32> plot(y, z, '-o');  
octave:33>
```



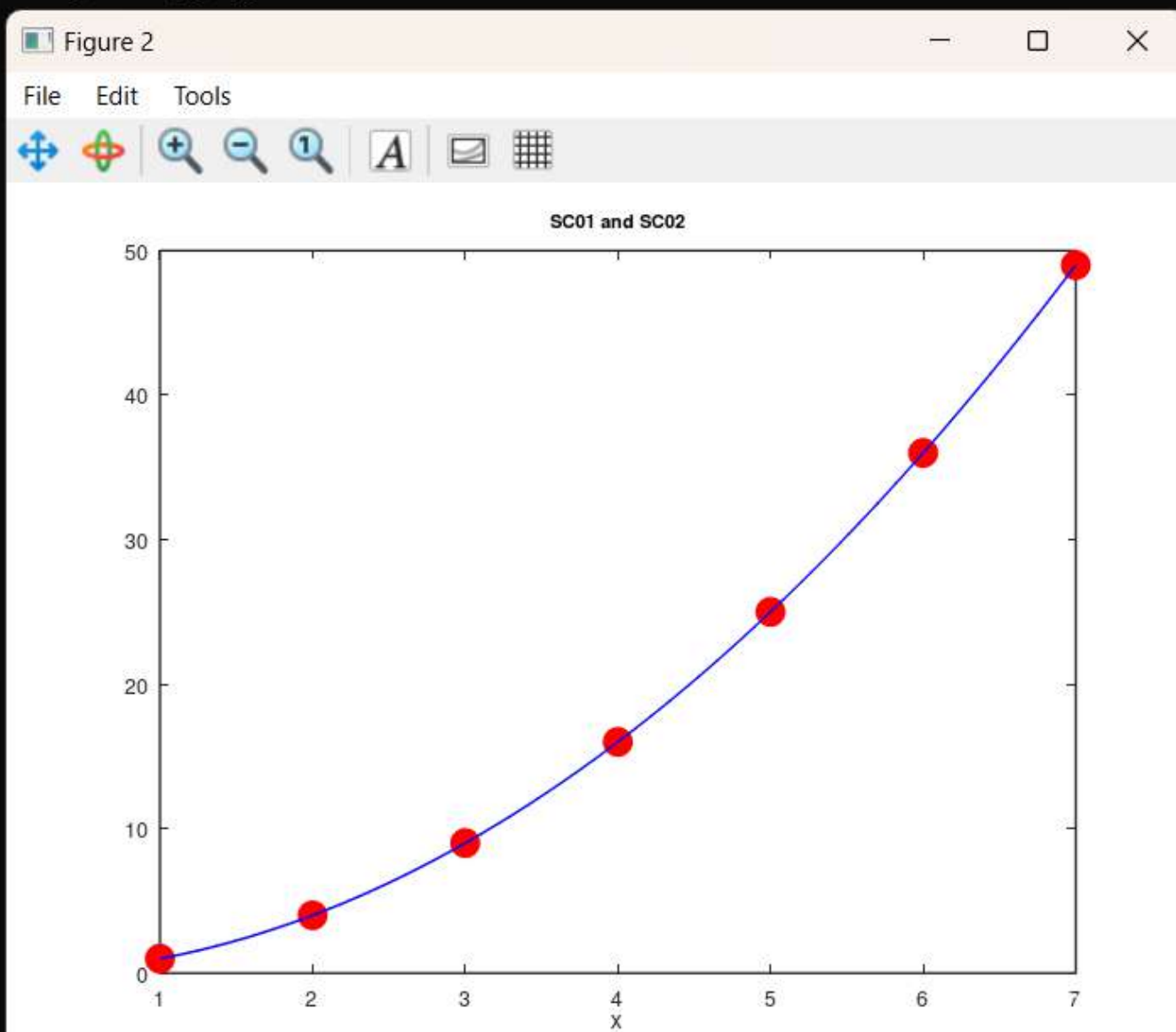
```
octave:45> x = [1, 2, 3, 4, 5, 6, 7];  
octave:46> y = [1, 4, 9, 16, 25, 36, 49];  
octave:47> figure;  
octave:48> plot(x, y, '-o');  
octave:49> title('SC01');  
octave:50> xlabel('x');  
octave:51> ylabel('y');  
octave:52> grid on;  
octave:53>
```



```
octave:53>  
octave:53>  
octave:53> x = linspace(1, 7, 98);  
octave:54> y = x.^2;  
octave:55> figure;  
octave:56> plot(x, y, '-r');  
octave:57> title('SC02');  
octave:58> xlabel('x');  
octave:59> ylabel('y');  
octave:60>  
octave:60>  
octave:60>  
octave:60>  
octave:60>
```



```
octave:60>
octave:60>
octave:60>
octave:60> x1 = [1, 2, 3, 4, 5, 6, 7];
octave:61> y1 = [1, 4, 9, 16, 25, 36, 49];
octave:62> x2 = linspace(1, 7, 98);
octave:63> x2 = linspace(1, 7, 98);
octave:64> y2 = x2.^2;
octave:65> figure;
octave:66> plot(x1, y1, 'ro', 'MarkerFaceColor', 'r');
octave:67> hold on;
octave:68> plot(x2, y2, '-b');
octave:69> title('SC01 and SC02');
octave:70> xlabel('x');
octave:71> ylabel('y');
```





```
octave:74>
octave:74>
octave:74>
octave:74>
octave:74> x = linspace(0, 80, 270);
octave:75> y = x.^3;
octave:76> y
y =
```

Columns 1 through 7:

0	2.6303e-02	2.1043e-01	7.1019e-01	1.6834e+00	3.2879e+00	5.6816e+00
---	------------	------------	------------	------------	------------	------------

Columns 8 through 14:

9.0221e+00	1.3467e+01	1.9175e+01	2.6303e+01	3.5010e+01	4.5452e+01	5.7789e+01
------------	------------	------------	------------	------------	------------	------------

Columns 15 through 21:

7.2177e+01	8.8774e+01	1.0774e+02	1.2923e+02	1.5340e+02	1.8042e+02	2.1043e+02
------------	------------	------------	------------	------------	------------	------------

Columns 22 through 28:

2.4360e+02	2.8008e+02	3.2003e+02	3.6362e+02	4.1099e+02	4.6231e+02	5.1773e+02
------------	------------	------------	------------	------------	------------	------------

Columns 29 through 35:

5.7741e+02	6.4152e+02	7.1019e+02	7.8361e+02	8.6191e+02	9.4527e+02	1.0338e+03
------------	------------	------------	------------	------------	------------	------------

Columns 36 through 42:

1.1278e+03	1.2272e+03	1.3323e+03	1.4433e+03	1.5603e+03	1.6834e+03	1.8129e+03
------------	------------	------------	------------	------------	------------	------------

```
octave:77> x
x =
```

```
Columns 1 through 10:
```

0	0.2974	0.5948	0.8922	1.1896	1.4870	1.7844	2.0818	2.3792	2.6766
---	--------	--------	--------	--------	--------	--------	--------	--------	--------

```
Columns 11 through 20:
```

2.9740	3.2714	3.5688	3.8662	4.1636	4.4610	4.7584	5.0558	5.3532	5.6506
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

```
Columns 21 through 30:
```

5.9480	6.2454	6.5428	6.8401	7.1375	7.4349	7.7323	8.0297	8.3271	8.6245
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

```
Columns 31 through 40:
```

8.9219	9.2193	9.5167	9.8141	10.1115	10.4089	10.7063	11.0037	11.3011	11.5985
--------	--------	--------	--------	---------	---------	---------	---------	---------	---------

```
Columns 41 through 50:
```

11.8959	12.1933	12.4907	12.7881	13.0855	13.3829	13.6803	13.9777	14.2751	14.5725
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

```
Columns 51 through 60:
```

14.8699	15.1673	15.4647	15.7621	16.0595	16.3569	16.6543	16.9517	17.2491	17.5465
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

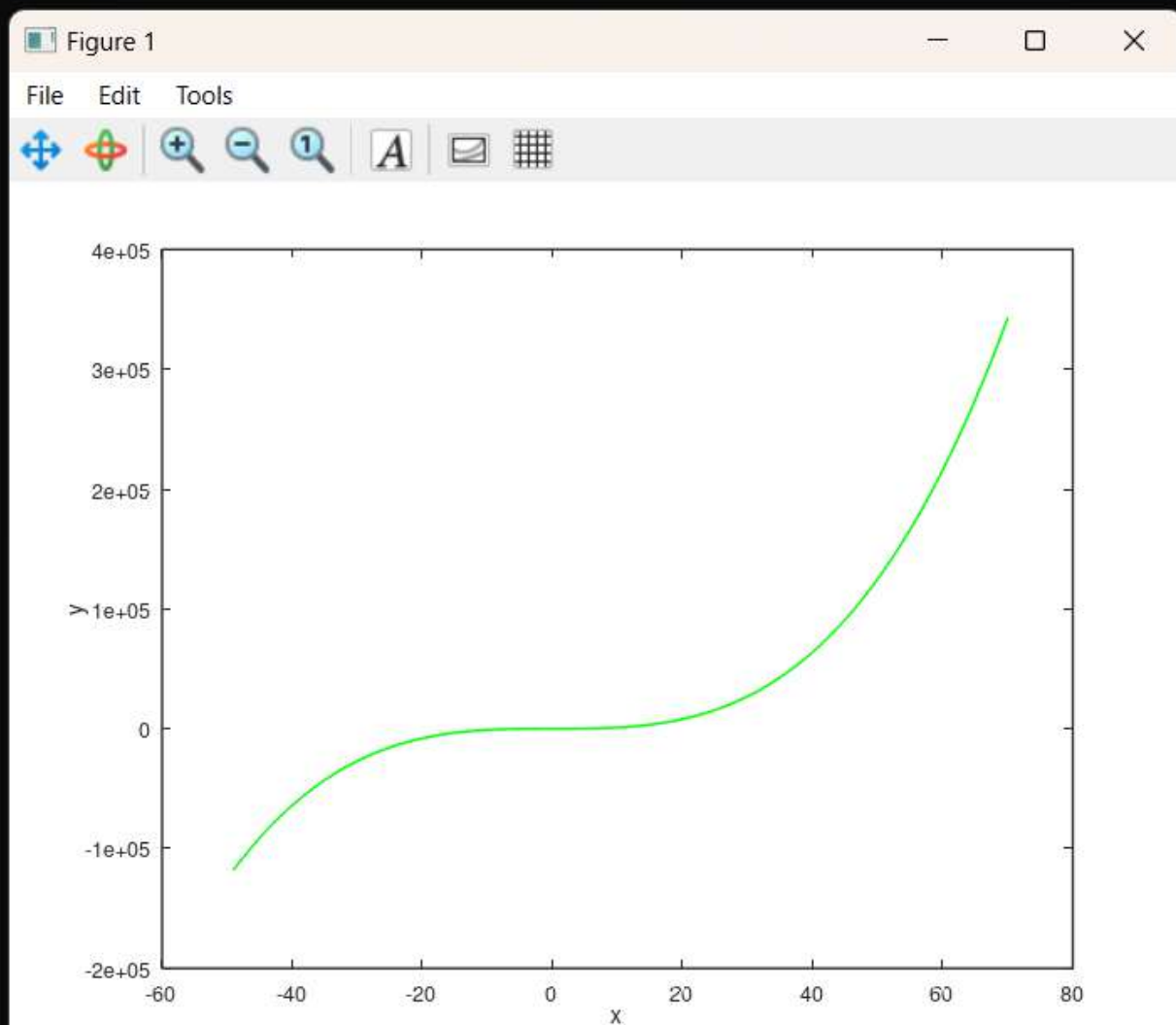
```
Columns 61 through 70:
```

17.8439	18.1413	18.4387	18.7361	19.0335	19.3309	19.6283	19.9257	20.2230	20.5204
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

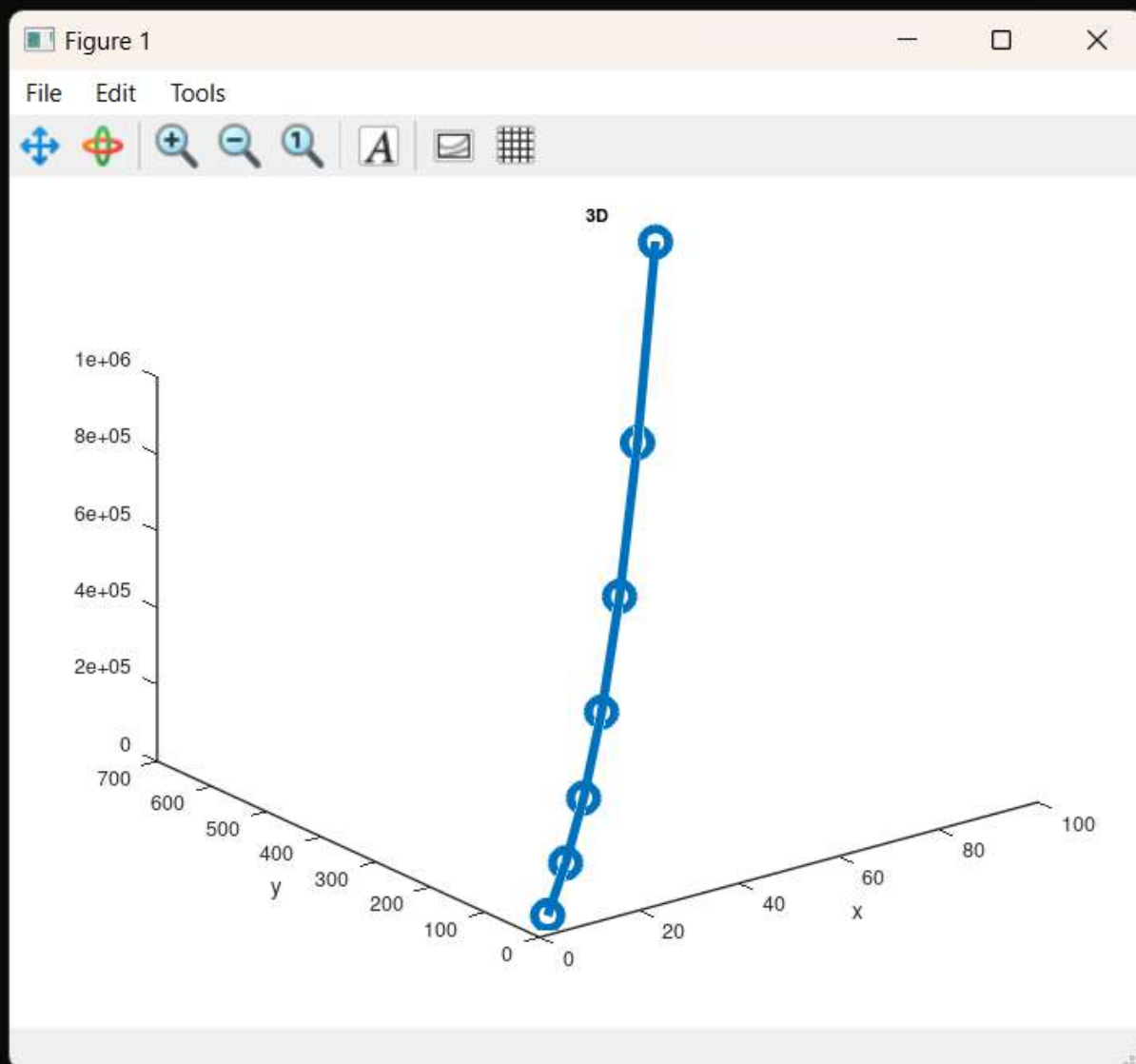
```
Columns 71 through 80:
```

20.8178	21.1152	21.4126	21.7100	22.0074	22.3048	22.6022	22.8996	23.1970	23.4944
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

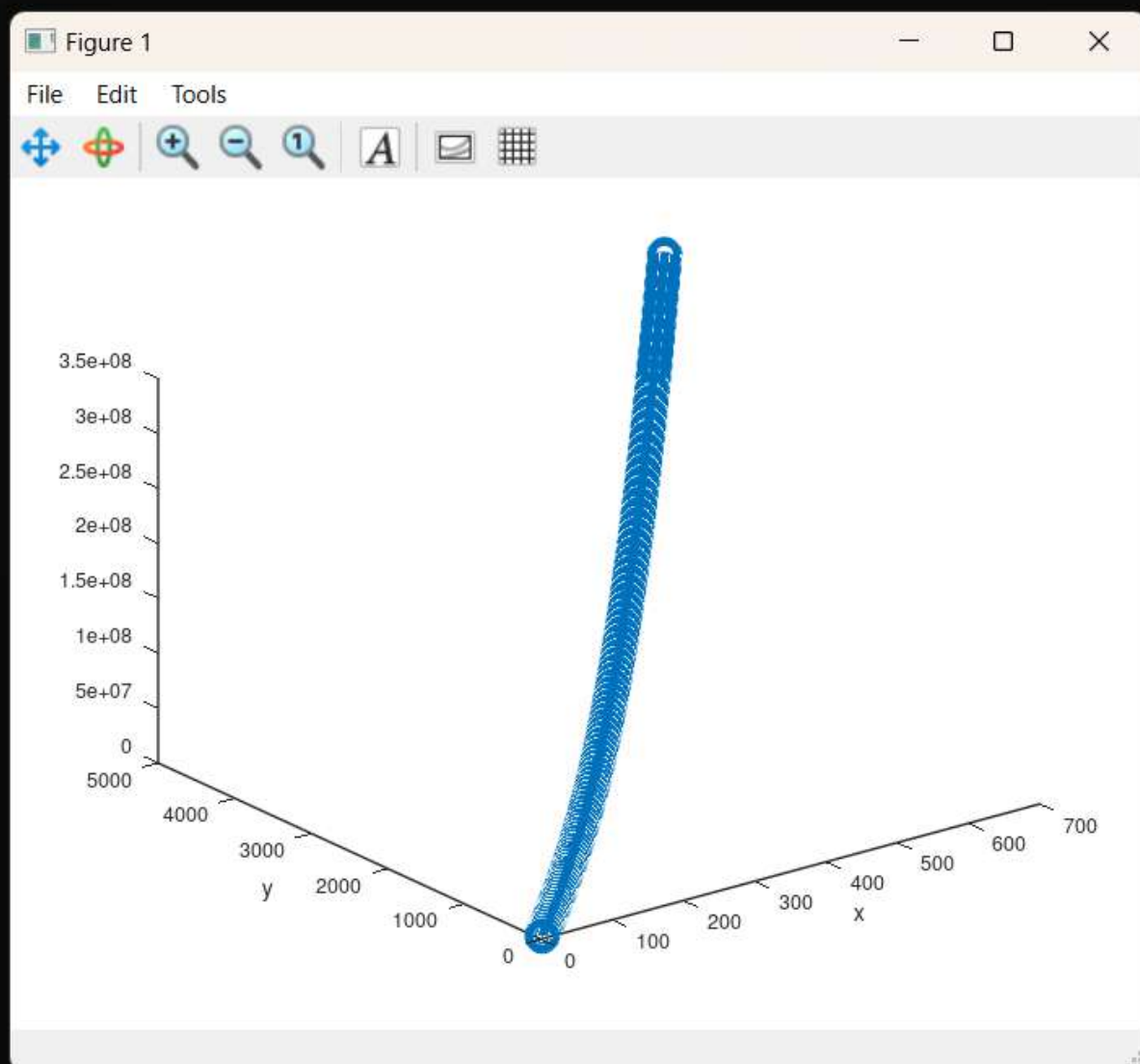
```
octave:78> x1 = linspace(-49, 70, 210);
octave:79> y1 = x1.^3;
octave:80> figure;
octave:81> plot(x1, y1, '-g');
octave:82> xlabel('x');
octave:83> ylabel('y');
octave:84> x2 = linspace(7, 100, 7);
octave:85> y2 = x2 .* 7;
octave:86> z2 = x2 .^ 3;
octave:87> disp(x2);
    7.0000    22.5000    38.0000    53.5000    69.0000    84.5000   100.0000
octave:88>
octave:88> disp(y2);
    49.000   157.500   266.000   374.500   483.000   591.500   700.000
octave:89>
octave:89> disp(z2);
    3.4300e+02   1.1391e+04   5.4872e+04   1.5313e+05   3.2851e+05   6.0335e+05   1.0000e+06
octave:90>
```










```
octave:90>  
octave:90>  
octave:90>  
octave:90> x = linspace(7, 100, 7);  
octave:91> y = x .* 7;  
octave:92> z = x .^ 3;  
octave:93> figure;  
octave:94> plot3(x, y, z, '-o', 'LineWidth', 2, 'MarkerSize', 6);  
octave:95> title('3D');  
octave:96> xlabel('x');  
octave:97> ylabel('y');  
octave:98> zlabel('z');
```



```
octave:99>
octave:99>
octave:99>
octave:99>
octave:99> x = linspace(7, 700, 98);
octave:100> y = x .* 7;
octave:101> z = x .^ 3;
octave:102> figure;
octave:103> plot3(x, y, z, '-o', 'LineWidth', 2, 'MarkerSize', 6);
octave:104> xlabel('x');
octave:105> ylabel('y');
octave:106> zlabel('z');
```
























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Editor

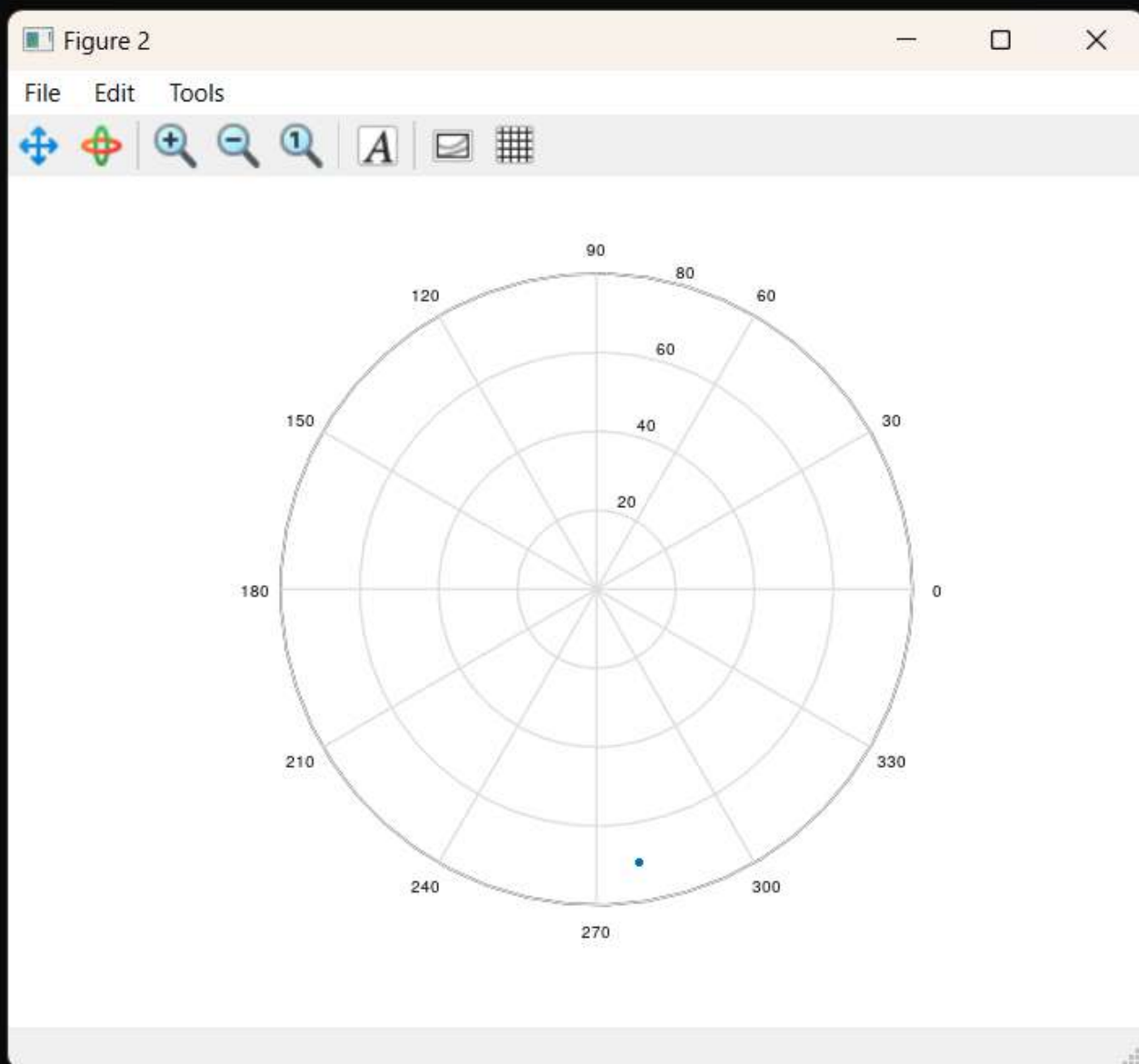
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cubeGraph.m 

```
1 x = linspace(7, 700, 98); % x = linspace(7, 700, 98)
2 y = x .* 7; % y = x .* 7 (element-wise multiplication)
3 z = x .^ 3; % z = x .^ 3 (element-wise cubic operation)
4
5 % Create a 3D plot
6 figure;
7 plot3(x, y, z, '-o', 'LineWidth', 2, 'MarkerSize', 6); % 3D plot with markers
8 title('3D Plot of x, y, and z (x = linspace(7, 700, 98))');
9 xlabel('x');
10 ylabel('y');
11 zlabel('z');
```

```
octave:108>  
octave:108> x = linspace(7, 700, 98);  
octave:109> y = x .* 7;  
octave:110> z = x .^ 3;  
octave:111> figure;  
octave:112> plot3(x, y, z, '-o', 'LineWidth', 2, 'MarkerSize', 6);  
octave:113> xlabel('x');  
octave:114> ylabel('y');  
octave:115> polar(30, 70);  
octave:116>
```



Editor

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shapes.m

```
1 # Created by Octave 9.2.0, Thu Dec 05 14:53:54 2024 GMT <unknown@Pegasus>theta = 0:0.02:2*pi;
2 a1 = 0.5 + 1.3 .* theta;
3 a2 = 5 * cos(theta);
4 r = [a1;a2];
5 PolarGraph = polar(theta,r);
6 set(PolarGraph, 'LineWidth' , 3);|
```