

The five basic skills for Mathematica :

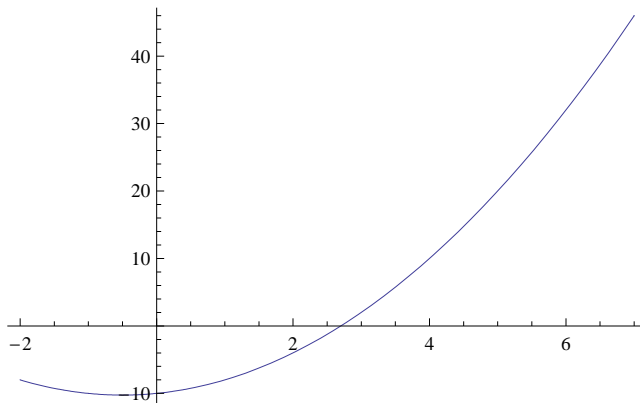
1. Define a function
2. Graph a function
3. Enter a table of values
4. Graph a table of values
5. Externally name a graph.

1. Define a function.

```
f[t_] := t + t^2 - 10
```

2. Graph a function.

```
Plot[f[t], {t, -2, 7}]
```



3. Enter a table of values. Click on Insert at the top of the screen. Then choose Table/Matrix. Give your table a name.

```
myDataTable = 

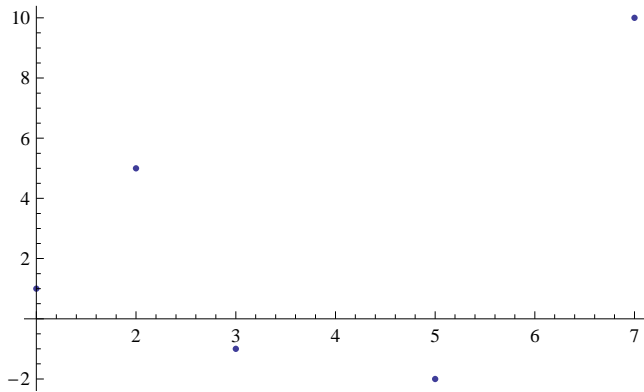
|   |    |
|---|----|
| 1 | 1  |
| 2 | 5  |
| 3 | -1 |
| 5 | -2 |
| 7 | 10 |


```

```
{{1, 1}, {2, 5}, {3, -1}, {5, -2}, {7, 10}}
```

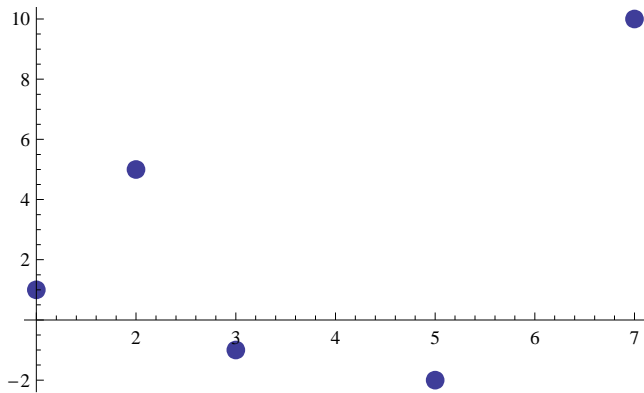
4. Graph a table of values

```
ListPlot[myDataTable]
```



Note that adding `PlotStyle->PointSize[.03]` inside the `ListPlot` command makes the dots larger.

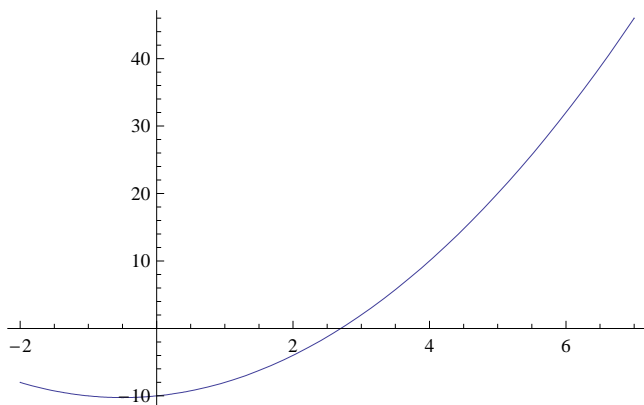
```
ListPlot[myDataTable, PlotStyle -> PointSize[.03]]
```



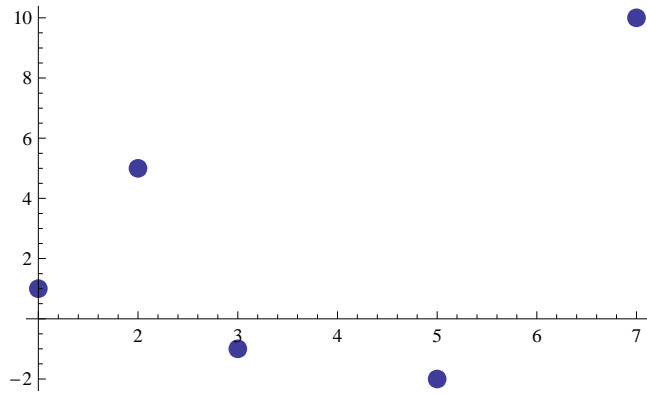
5. Externally name a graph.

To combine graphs, we externally name them and then use the `Show` command to see them together. To externally name a graph means to put a name at the beginning of the command that draws the graph. See the three lines below.

```
myFunctionGraph = Plot[f[t], {t, -2, 7}]
```



```
myDataGraph = ListPlot[myDataTable, PlotStyle -> PointSize[.03]]
```



```
Show[myDataGraph, myFunctionGraph]
```

