

Plotting(3) - Pie Charts

The pie chart is the simplest of all three. The command for creating a pie chart is `pie(X, (other arguments))` where `X` can only be vectors. If the sum of all the elements in `X` is less than or equal to one, then the values in `X` represent the percentages of the pie chart they occupy. Meaning, that if the sum of the values in `X` is less than one the pie chart will not be a full circle. If the sum of the values in `X` is greater than one, the percentage of the pie chart occupied by one element will be that element over the sum. Here are the syntaxes :

1. `pie(X)`

Creating a simple pie chart

2. `pie(X, explode)`

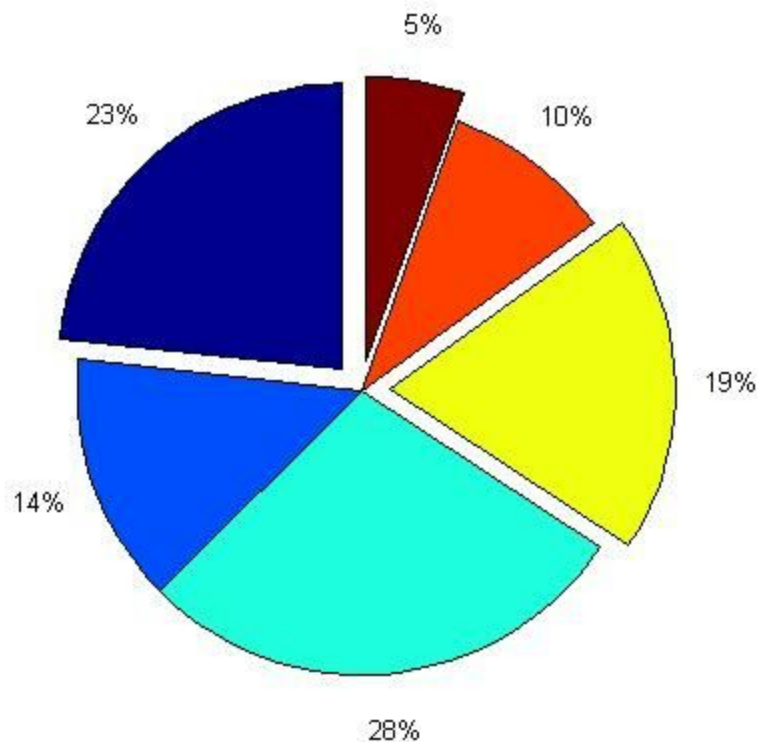
`explode` is an array of booleans, or a vector consisting of zeros and ones. The length of `X` and `explode` must match. If the element in a certain index of `explode` is 1, the corresponding index of the element in `X` will have its portion visually “pop out.”

For example:

```
>> explode = [1,0,0,1,0,1]
```

```
>> x = [51,31,62,42,21,12]
```

```
>> pie(x, explode)
```

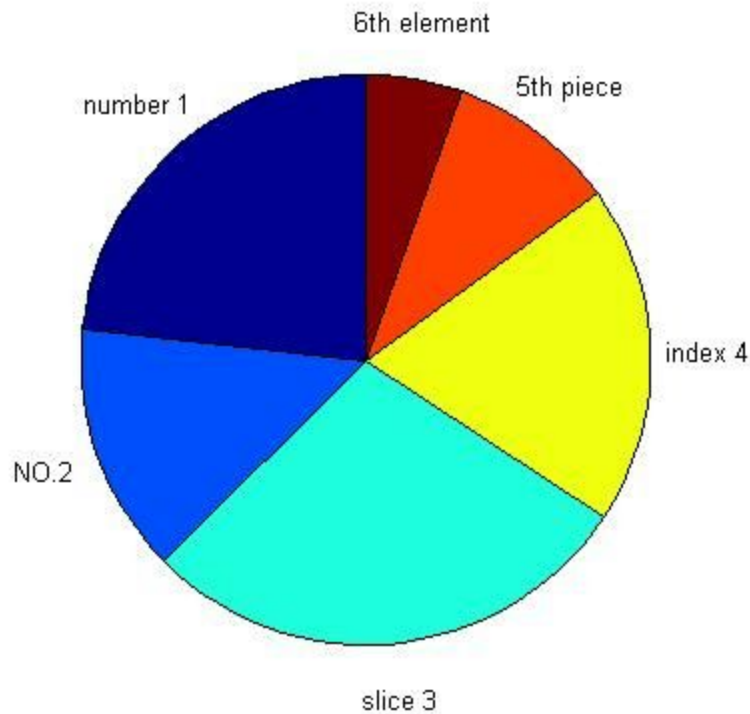


3. pie(X, labels)

The argument “labels” works the same way as explode, except that “labels” is an array of Strings and will label the corresponding slice.

For example:

```
>> labels = {'number 1', 'NO.2', 'slice 3', 'index 4', '5th piece', '6th element'}  
>> x = [51,31,62,42,21,12]  
>> pie(x, labels)
```



For all three graphs:

1. To add a title, use the `title(name)` function right after using the plot function.
2. To add axis labels, use `xLabel(name)` and `yLabel(name)` functions right after the plotting.
3. To add legends, use the `legend(name1, name2 ... nameN)` function after creating the plot. N is the number of lines you have and the order to which each name is assigned depends on the order you enter the names in. For adjusting details such as the positioning and styling of legends, visit: <http://www.mathworks.com/help/matlab/ref/legend.html>