Plotting(2) - Bar Graphs

Making a bar graph is similar to making a line graph because the possible combinations of X and Y are essentially the same. In the bar() function, the possible combinations of X and Y are:

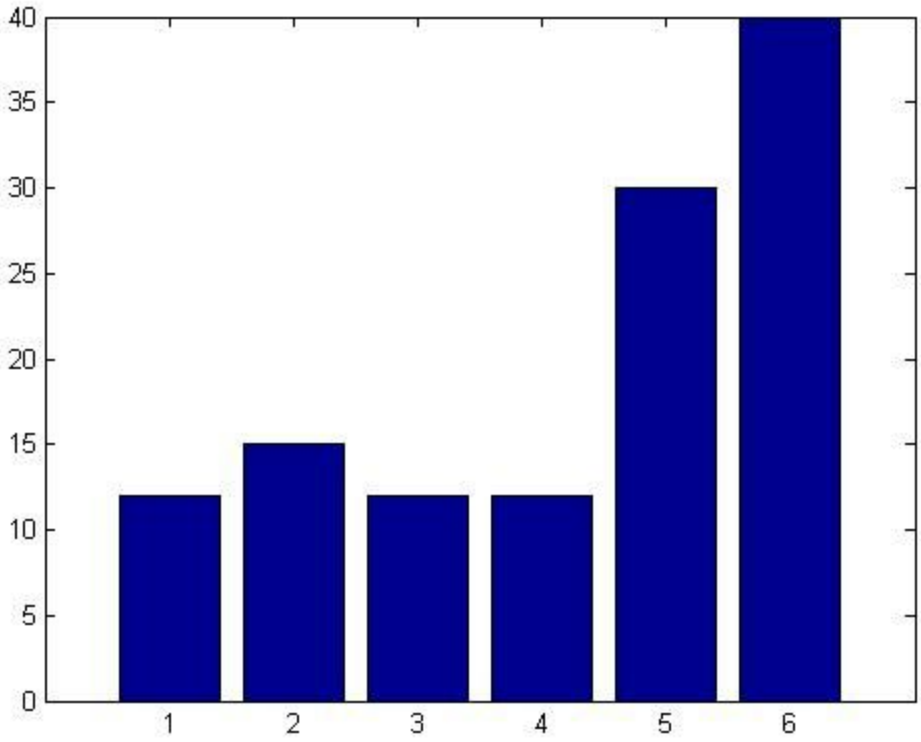
(For all examples, I am going to use y = [12,14,17;42,24,13;53,64,12], unless otherwise noted)

A. Add in Y:

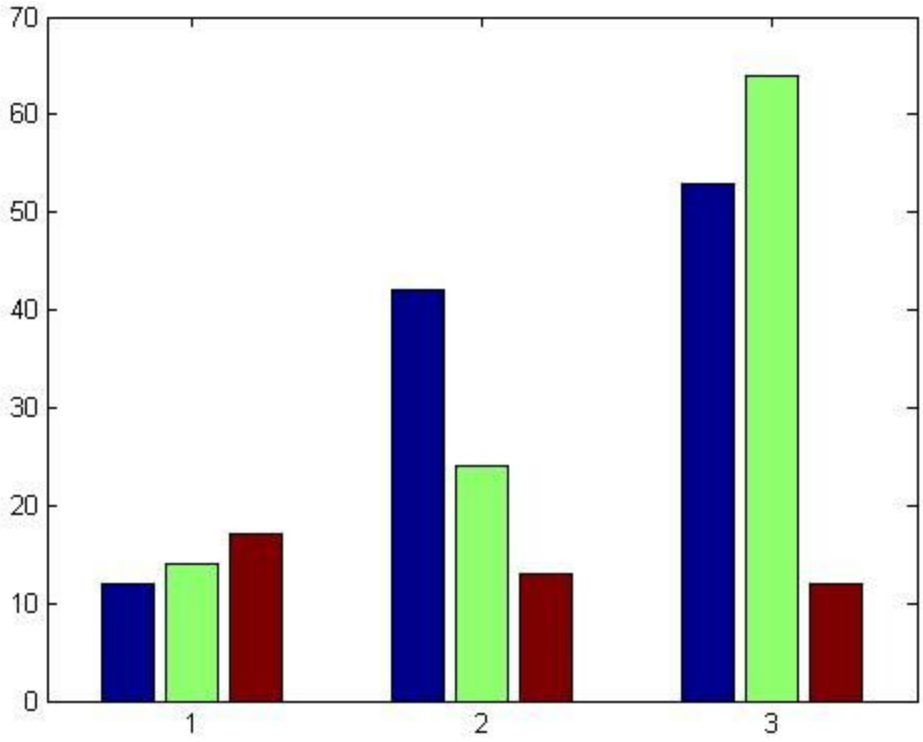
The X value will be the index of Y in the vector.

For example:

```
>> y = [12,15,12,12,30,40]
>> bar(y)
```

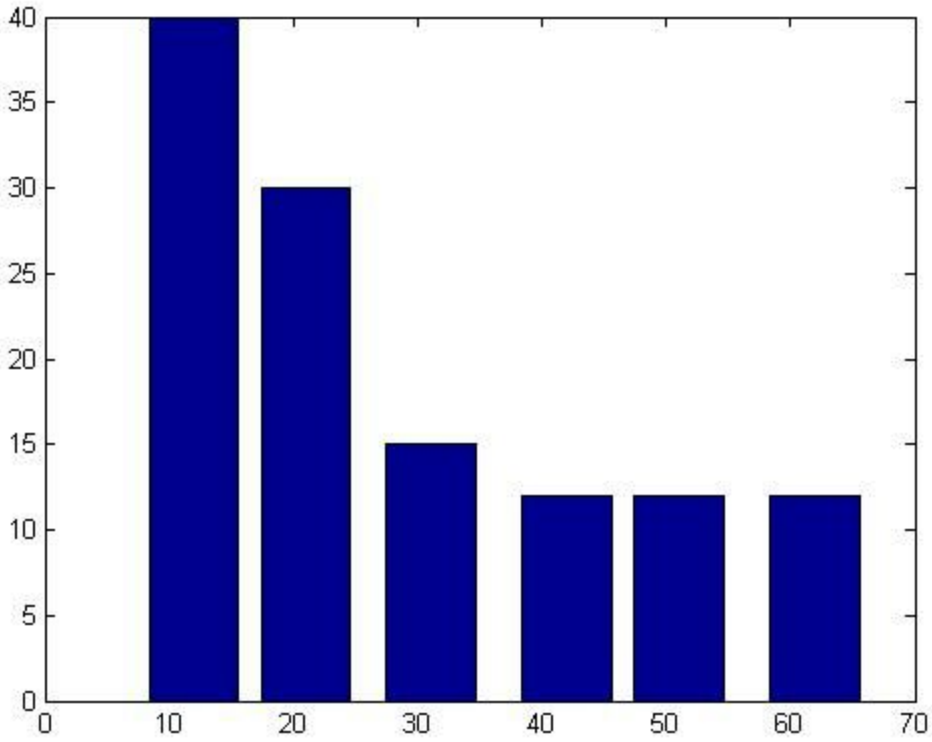


B. Only put in Y, being a matrix
The X value will be the row index in Y.
Each group will be a row in Y. If Y has 3 columns and 5 rows, the graph will have 5 groups of bar graphs, each containing 3 bars.
For example:
>> bar(y)



C. Put in both X and Y as vectors with the same length:
X cannot contain duplicate values and it does not have to be in order.
The x tick marks will be values in X, in the order of its indexes.
For example:

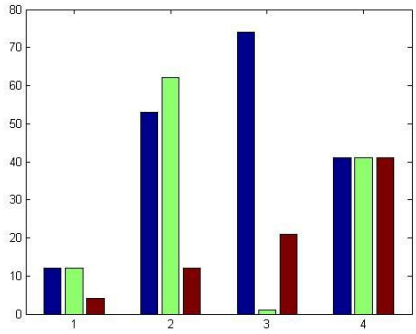
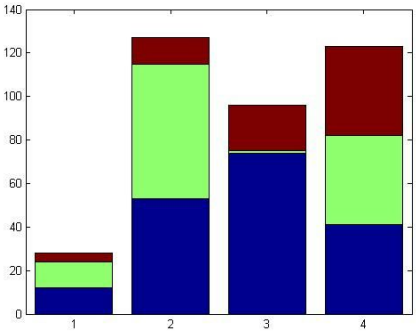
```
>> x = [51,31,62,42,21,12]
>> y = [12,15,12,12,30,40]
>> bar(x, y)
```

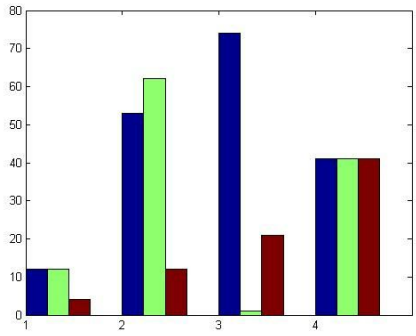
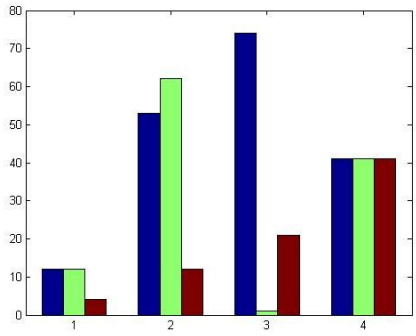


D. Put in both X and Y as matrices with the same dimensions:
X cannot have duplicate values across columns.
The x tick marks will be values in the first column of X, containing bars from the corresponding row in Y.

Unlike line graphs, the bar() function only possesses a few options for arguments.

A. bar(y)
   As shown above.
B. bar(x, y)
   As shown above.
C. bar(any combination of x and y, arguments)
   Here are a list of arguments:
   1. Width:
      Width of the bar; positive values only; default is 0.5.
   2. Style:
      Style of the bar graph; this will only make a difference if the graph has more than one bar in each group.
      The possible inputs are:

Style	Effect
‘grouped’	 (default)
‘stacked’	

‘histc’	
‘hist’	

3. Color:
   See the color chart for line graphs.
4. Name-Value pair arguments:

Setting	Value
‘EdgeColor’	color values only
‘FaceColor’	color values only
‘BaseValue’	The baseline location; numeric values only
‘LineStyle’	The outline of bars. See the chart in Line Graphs for effects and input values.
‘LineWidth’	positive numeric value values only