

# Basic Plotting

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## Overview

**`plot(xvalues,yvalues,'style-options')`**

examples

<code>plot(x,y)</code>	plots y vs x with a solid line
<code>plot(x,y,'--')</code>	plots y vs x with a dashed line
<code>plot(x)</code>	plots the elements of x against the rows

## Style Options

### Color Style options

y = yellow  
m = magenta  
c = cyan  
r = red  
g = green  
b = blue  
w = white  
k = black

### Line Style options

- = solid  
-- = dashed  
: = dotted  
-. = dashed-dot  
none = no line

### Marker Style options

+ = plus sign  
 o = circle  
 \* = asterick  
 x = x-mark  
 . = point  
 ^ = up triangle  
 s = square  
 d = diamond

## Lable and Title

<code>xlabel('Pipe Length')</code>	labels x-axis with Pipe Length
<code>ylabel('Fluid Pressure')</code>	labels y-axis with Fluid Pressure
<code>title('Pressure Variation')</code>	titles the plot with Pressure Variation
<code>legend(string1,string2,...)</code>	produces legend using the text in string1 string2 etc as labels
<code>legend(LineStyle1,sting1,...)</code>	specifies the line style of each label writes the legend outside the plot frame
<code>legend(...,pos)</code>	if pos = -1 and inside if pos = 0,
there are other options for pos too, and	
<code>legned off</code>	deletes the legend from the plot

## Axis Control

**axis([xmin xmax ymin ymax])**

Examples

```

axis([-5 10 2 22]);           %set the x-axis from 05 to 10 and y axis from 2 to
axy = [-5 10 2 22]; axis(axy) %same as above,and
ax = [-5 10]; ay = [2 22]; axis([ax ay]); %same as above
  
```

<b><code>axis ( ' equal' )</code></b>	<b>sets equal scale on both axes,</b>
<b><code>axis ( ' square' )</code></b>	<b>sets the default rectangular frame to a square,</b>
<b><code>axis ( 'normal' )</code></b>	<b>resets the axis to default values,</b>
<b><code>axis ('axis' )</code></b>	<b>freezes the current axes limits, and</b>
<b><code>axis ( ' off' )</code></b>	<b>removes the surrounding frame and the tick marks.</b>

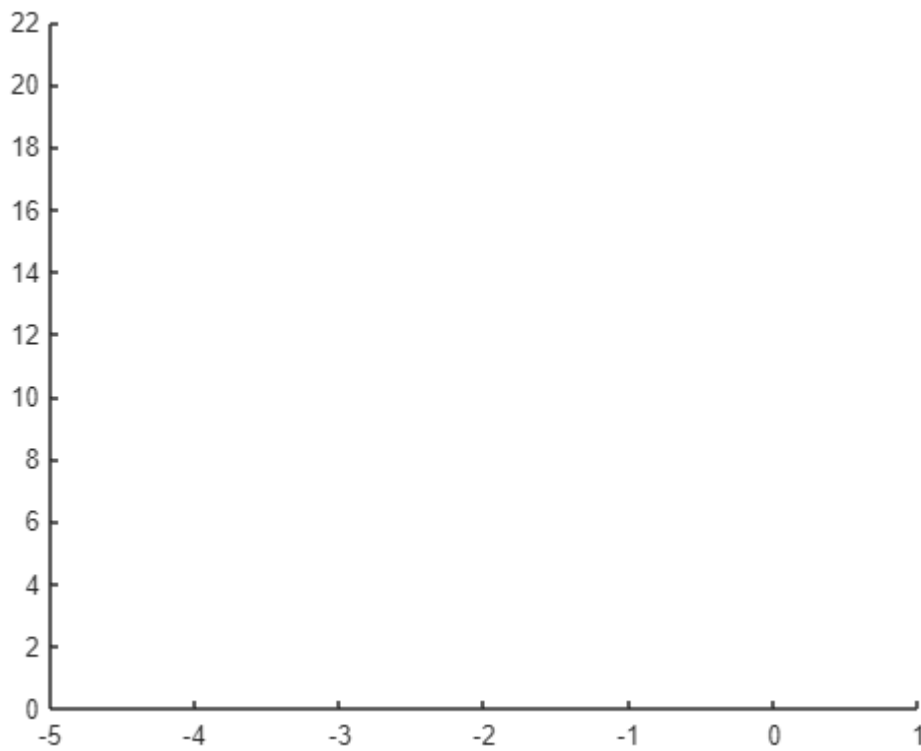
## Semi Axis Control

```

axis ( [-5 10 -inf inf] )      %sets the x-axis limits at -5 and 10 and lets
  
```

```
axis ( [-5 inf -inf 22])
```

%the y-axis limits be set automatically, and  
%sets the lower limit of the x-axis and the



% upper limit of the y-axis, and leaves the  
% other two limits to be set automatically.