

# Hello Mellow

In [7]: *#To execute a line press CTRL+ENTER*

In [8]: *# is the commenting sign '#' ater this sign the code in that line will be not exe*

Or in Ipython notebook simply use different heading from the 'Code' falldown menu  
You can change the name of the document simply just clicking on the 'Untitled' field.  
The only bad thing is that it does not have spell-check on the fly, so sorry for the misstypes.

To open ipython notebook simply execute from the terminal of command prompt:

```
ipython notebook
```

or in case you have Shophos antivirus:

```
ipython notebook --ip=localhost
```

Each time you save a session it will be available from machine where you saved it, but you can traffic the .ipynb file, send it via email and reopen on another machine.

In [1]: `%pylab inline`

```
Welcome to pylab, a matplotlib-based Python environment [backend:
module://IPython.zmq.pylab.backend_inline].
For more information, type 'help(pylab)'.
```

In [2]: `from pylab import *`

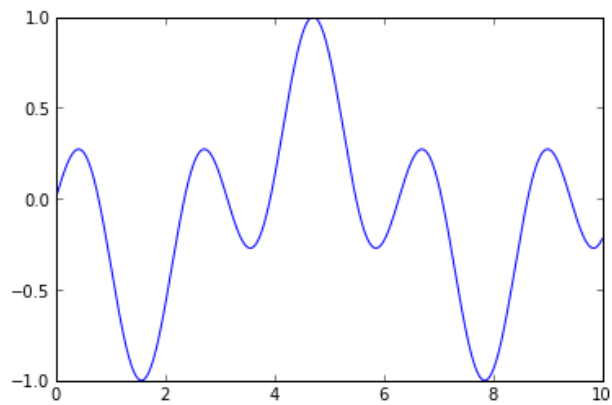
In [3]: *##pylab inline # have the inline if you want to plot in-line, else it will plot  
# and have it before the import*

In [4]: `x=linspace(0,10,1000)`

In [5]: `f=sin(x)*cos(x*2)`

```
In [6]: plot(x,f)
```

```
Out[6]: [<matplotlib.lines.Line2D at 0x3fbel10>]
```



```
In [7]: show()
```

One more plot example:

```
In [8]: #Cardioid example
```

```
In [9]: # the simple formula for a cardioid in polar coordinates r(th)=1-sin(th)
```

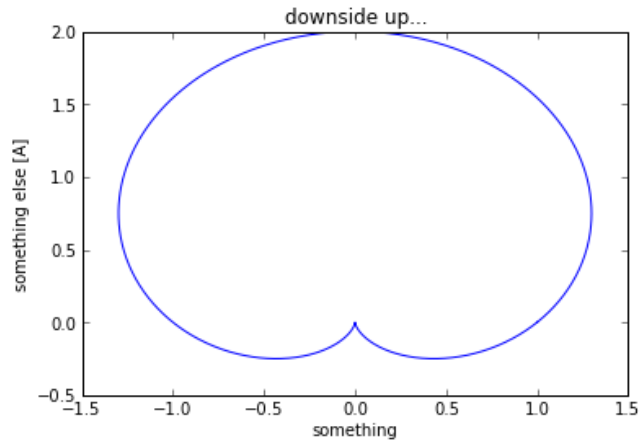
```
In [10]: th=linspace(0,360,1000) # 360 degrees, 1000 points
```

```
In [11]: thx=(1-sin(th*pi/180))*cos(th*pi/180)
```

```
In [12]: thy=(1-sin(th*pi/180))*sin(th*pi/180)
```

```
In [17]: plot(thx,-thy)
         title ('downside up...')
         xlabel('something')
         ylabel('something else [A]')
```

Out[17]: <matplotlib.text.Text at 0x4595090>



```
In [14]: #If you have problem with showing the plot inline
         #close all windows all terminals, command prompts, if still no inline , restart t
```

Ok, one more example:

```
In [20]: %load http://matplotlib.sourceforge.net/mpl\_examples/pylab\_examples/integral\_demo
```

```

In [18]: #!/usr/bin/env python

# implement the example graphs/integral from pyx
from pylab import *
from matplotlib.patches import Polygon

def func(x):
    return (x-3)*(x-5)*(x-7)+85

ax = subplot(111)

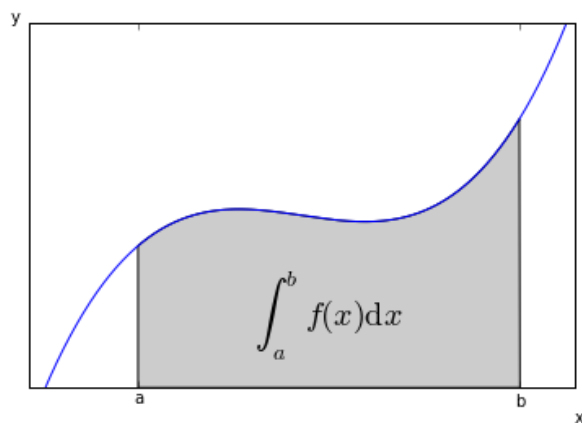
a, b = 2, 9 # integral area
x = arange(0, 10, 0.01)
y = func(x)
plot(x, y, linewidth=1)

# make the shaded region
ix = arange(a, b, 0.01)
iy = func(ix)
verts = [(a,0)] + list(zip(ix,iy)) + [(b,0)]
poly = Polygon(verts, facecolor='0.8', edgecolor='k')
ax.add_patch(poly)

text(0.5 * (a + b), 30,
     r"$\int_a^b f(x)\mathrm{d}x$", horizontalalignment='center',
     fontsize=20)

axis([0,10, 0, 180])
figtext(0.9, 0.05, 'x')
figtext(0.1, 0.9, 'y')
ax.set_xticks((a,b))
ax.set_xticklabels(('a','b'))
ax.set_yticks([])
show()

```



In [ ]: