Python
Python tasks

1. Read my Python primer on the ASTR5160 links page

2. Create a text file that contains two columns, each containing the numbers 1 to 10
   - *emacs* is one editor that can be used to make files

3. Use *numpy.loadtxt* and *matplotlib* (see the links page) to plot those two columns (e.g. as an $x$ vs $y$ plot)

4. Use the *matplotlib plot* command to plot the data as both a straight line and as yellow crosses

5. Now, write a single function that can be called from the command line to both read the data and make the plot
   - use *if __name__ == "__main__":* (see the links page)
Python tasks

1. Create a function that, when passed an x value, calculates \( y = x^2 + 3x + 8 \)
   - you don’t have to document all in-class work, but I expect careful commenting of any submitted work

2. Write a function that calls your function from step 1 to produce a plot of \( y = x^2 + 3x + 8 \) against x
   - limit the x-axis to the range -5 to 5 (see the `plot.axis` command in the `matplotlib` tutorial)
   - try `import numpy as np, x = np.arange(10)-4.5` and `print(x)` to see how to make an array of x values
   - practice manipulating that array (e.g., try `print(2*x)`)
Python tasks

1. Commit your function and procedure to SVN
   - don’t forget to `svn up` before you `svn ci`

2. Look at functions that other students have committed
   - did other people use features you didn’t?
   - did they consider color or line thickness?
   - did they use comments to make the code more informative?