Tutorial: Recursion

These are exercises to familiarize yourself with recursive functions.

Using the lecture notes, write two new IDL functions (with function and filenames the same):
`factorial_recursive.pro`
`fibonacci.pro`

Lecture notes can be viewed in two formats.
Slideshow: http://keflavich.github.io/astr2600_notebooks/Recursion.html
Notebook: http://nbviewer.ipython.org/urls/github.com/keflavich/astr2600_notebooks/raw/master/Recursion.ipynb

Journal the following:

Run these with a few numbers to check and make sure they're right. Check `factorial_recursive` against the built-in IDL `factorial` function for 5,6,7,8.

The first fibonacci numbers are: `0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144`
(see http://oeis.org/A000045).

Add `print` statements to both `factorial` and `fibonacci`, printing out `n` or `x` (whichever number is input). Run the functions with 5 as the input. What is the order of the calls? (your journal should note this, but you should take particular note of which print statements get called first, and compare that to which *return* statements get called first)