

Goals: Introduction to numpy.

For this homework, submit your work in a “.py” file. Note that some points may be deducted if your code could obviously be written in a “more Pythonic” way. Note: see the code accompanying this lab.

1) Complete each of the functions given in the code accompanying this lab. Each function, with the exception of the first has a one-line solution that in most cases is very short. Full credit will be given for finding the best, most-compact answer, making best use of numpy’s features (rather than having something that “just works”). These exercises were drawn from the class notes, so most of what you’ll need to consider is given there.

Notes:

Don’t worry about sanity checking inputs. E.g., if the argument is supposed to be a positive `int`, assume it is so.

Unless otherwise specified or implied, a function will return “None”

Unless specified, the numpy arrays are not necessarily 2-dimensional (although the examples use 2D)

If you find yourself writing something complicated, take more time to look for a simpler way to express it.

2) Run test code on each of the functions and verify it gives the correct results.