`allthemath.org` Vol II Episode II – Python cheat sheet

`from numpy import *`	Start each program with this line
`#`	Mark a line as a comment (ignored by Python)
variable `= ···`	Set a variable to a value
`+`, `-`, `*`, `/`	Add, subtract, multiply, divide
`**`	Exponentiation (powers)
`sqrt(`*variable*`)`	Square root
`print(···)`	Print a variable to the screen
`print("text" + str(x))`	Combine text and variable (`x`)
`array([3,4,2])`	Create a vector with elements 3, 4, 2
`zeros(6)`	Create an all-zero vector with 6 elements
`arange(7)`	Create a vector with elements 0, 1, 2, . . . , 6
`arange(5,12)`	Create a vector with elements 5, 6, 7, . . . , 11
`arange(5,50,5)`	Create a vector with elements 5, 10, 15, . . . , 45
`random.rand(4)`	Create a vector with 4 random numbers between 0 and 1
`round_(variable)`	Round a non-integer to the nearest integer
`trunc(variable)`	Truncate non-integer part of a number
`x.size`	Get the length (number of elements) of the vector `x`
`x[2]`	Get element 2 of the vector `x`
`x[3:7]`	Get elements 3 through 6 of the vector `x`
`x.dot(y)`	Compute the dot product of `x` and `y`
`linalg.norm(x)`	Compute the Euclidean norm of `x`
`linalg.norm(x, ord=0)`	Compute the ℓ^0 norm of `x`
`linalg.norm(x, ord=1)`	Compute the ℓ^1 norm of `x`
`linalg.norm(x, ord=Inf)`	Compute the ℓ^∞ norm of `x`
`x.sum()`	Add up the elements of `x`
`x.min()`, `x.max()`	Find the minimum (or maximum) element of `x`
`x.argmin()`, `x.argmax()`	Find the *index* of the minimum (or maximum) element of `x`
`loadtxt("filename")`	Read data from a text file into a vector