Translation Table

Operation	Python	MATLAB
Math	`2 * 2 + 5/4 - 2**4 + (3 + 3)`	`2 * 2 + 5/4 - 2^4 + (3 + 3)`
Assignment	`x = 10`	`x = 10`
List Creation	`x = [1, 2, 3]`	`x = [1 2 3]`
2D List Creation	`x = [[1, 2, 3], [4, 5, 6]]`	`x = [1 2 3; 4 5 6]`
List concatenation	`x = x + [7, 8, 9]`	`x = [x, 7 8 9]`
Size of a list	`len(lst)`	`size(lst)`
list indexing	`lst[0]`	`lst(1)`

If Statement	`if stuff:`
	`  things = 99`
	
	`if a < b:`
	`  things = 99`
	`elif a < c:`
	`  things = 88`
	`else:`
	`  things = 'Who Knows'`
		`if stuff`
		`  things = 99`
		`end`
		
		`if a < b`
		`  things = 99`
		`elseif a < c`
		`  things = 88`
		`else`
		`  things = 'Who Knows'`
		`end`

While Loop	`while something:`
	`  x = x + 1`
		`while something`
		`  x = x + 1`
		`end`

For Loop	`for i in range(10):`
	`  x = x + i`
		`for i = 0:9`
		`  x = x + i`
		`end`

Logical Operators	`and, or, not`	`&, |, ~`
Relational Operators	`==, !=, <, <=, >, >=`	`==, ~=, <, <=, >, >=`
Function Definition	`def f(x):` `  return x**2`	`function a = f(x)` `  a = x^2`

Some other things to keep in mind

- In MATLAB, everything is printed to the screen by default. To prevent this from happening, end your line in a semicolon. For example, `x = 10` will print `10` but `x = 10;` will print nothing.
- MATLAB allows you to separate list elements by commas (like in python,) but this is unnecessary.
- In MATLAB `[[1, 2, 3], [4, 5, 6]]` is valid code, however it doesn't do what you'd expect it to do coming from Python. In MATLAB the above line is equivalent to `[1 2 3 4 5 6]`.
- MATLAB does not have a modulus operator, but it does have a mod function. So where you would do `x % y` in Python, you would do `mod(x, y)` in MATLAB.
- The "return variable" in a MATLAB function can be called whatever you wish, but calling it `a` seems to be convention.
- In MATLAB, list indices start at 1 rather than 0.