

Translation Table

Operation	Python	MATLAB
Math	$2 * 2 + 5/4 - 2**4 + (3 + 3)$	$2 * 2 + 5/4 - 2^4 + (3 + 3)$
Assignment	<code>x = 10</code>	<code>x = 10</code>
List Creation	<code>x = [1, 2, 3]</code>	<code>x = [1 2 3]</code>
2D List Creation	<code>x = [[1, 2, 3], [4, 5, 6]]</code>	<code>x = [1 2 3; 4 5 6]</code>
List concatenation	<code>x = x + [7, 8, 9]</code>	<code>x = [x, 7 8 9]</code>
Size of a list	<code>len(lst)</code>	<code>length(lst)</code>
list indexing	<code>lst[0]</code>	<code>lst(1)</code>
range generation	<code>range(start, stop, step)</code>	<code>start:step:stop</code>
If Statement	<pre>if stuff: things = 99 if a < b: things = 99 elif a < c: things = 88 else: things = 'Who Knows'</pre>	<pre>if stuff things = 99 end if a < b things = 99 elseif a < c things = 88 else things = 'Who Knows' end</pre>
While Loop	<pre>while something: x = x + 1</pre>	<pre>while something x = x + 1 end</pre>
For Loop	<pre>for i in range(10): x = x + i</pre>	<pre>for i = 0:9 x = x + i end</pre>
Logical Operators	and, or, not	&, , ~
Relational Operators	==, !=, <, <=, >, >=	==, ~=, <, <=, >, >=
Function Definition	<pre>def f(x): return x**2</pre>	<pre>function a = f(x) a = x^2</pre>

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 use `x % y` in Python, you would use `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.