

# Lab 1.03 - Printing & Variables ## Part 1 - Printing Practice Practice typing out some statements in the editor part of the IDE, then hit "Run" at the top of the screen:

Expression	Expected Output	Did anything unexpected happen?
<code> `print("1")` `print(1)` `print(1 + 2)` `print("1" + "2")` `print("this" + " " + "is" + " " + "a" + " " + "sentence" + ".")`</code>	<code> 1 1 3 1 2 1 2 this is a sentence.</code>	

## SNAP Flashback - Print Comparison ![Code] (lab1.03%20-%20code.png) ![Image] (lab1.03%20-%20image.png) ## Part 2 - Variables Practice #### 1. In your Console ##### Type and run the following `python animal = "dogs" print(animal + " are really cool.")` #### In your Notebook ##### Respond to the following 1. What happens? 2. How would you make the program print out "cats are really cool" instead? #### 2. In your Console ##### Type and run the following code `python print(dogs + " are cool.")` #### Continue In your Notebook ##### Respond to the following questions 1. What output does this produce? 2. Why does this happen? #### 3. In your Console ##### Rewrite the following Snap! Program in Python ![snap\_blocks\_variables] (snap\_blocks\_variables.png) ## Part 3 - Four Fours #### The four fours challenge Using four 4's and any operations, try to write equations that have the numbers from 0 to 4 as the answer. You should use Python's arithmetic operations: `*` \+ addition `*` \- subtraction or negation `*` \\* multiplication `*` / division `*` ( ) parentheses for grouping `*` \*\* power You may also use 44 or 4.4, which count as two fours, or .4, which counts as one four. For example, one solution for zero is: `python print("Zero is", 44-44)` Can you find a different solution? Here are what the results, but not the source code, will look like. (Note: answers may have trailing zeros if floating point arithmetic is used which is fine, i.e. 1 may be displayed as 1.0) `python Zero is 0 One is 1 Two is 2 Three is 3 Four is 4` ## Bonus Print the output below, but only using `**one**` line of code. Feel free to use online resources. `python Wow! This is on a new line!` ## Bonus 2 Can you find four fours for 5 to 10?