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? | |------------|-----------------|--------| | `print("1")` | | | | `print(1)` | | | | `print(1 + 2)` | | | | `print("1" + "2")` | | | | `print("this" + " " + "is" + " " + "a" + " " + "sentence" + ".")` | ## 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?