

# Discussion 10: Intro to Python

## Warm-Up

1. What is the difference between `print` and `return` in Python?

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2. Once you write Python code, how do you run it?

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3. What is the difference between running `python3`, `python3 <filename>`, and `python3 -i <filename>`? What do each of them do?

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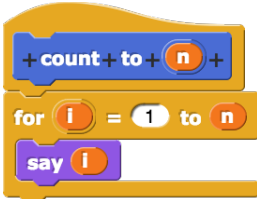








4. How are `while` loops in Python similar to `repeat until` loops in Snap? How do they differ?

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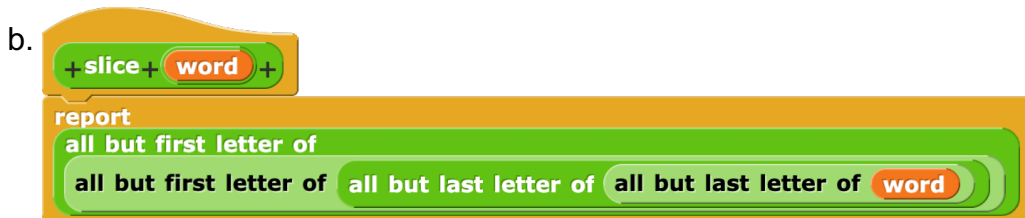
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## Learning a Not-So-Foreign Language

1. Translate the following expressions from Snap! to Python:

	_____	
	_____	
	_____	
	_____	
	_____	
	_____	
	_____	
	_____	
	_____	

2. Translate the following blocks of code from Snap! to Python line by line:



### Let's Write Some Python

1. Write a function that counts the number of times a given letter appears in a given string. Try writing this both iteratively and recursively!

<pre>def count_letters(letter, str):</pre>	<pre>def count_letters(letter, str):</pre>
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2. Define the function Fizzbuzz so that it does the following:

- Iterates through the numbers 1 – 100, and for each number:
  - Prints “fizz” if it is divisible by 3.
  - Prints “buzz” if it is divisible by 5.
  - Prints “fizzbuzz” (and *not* “fizz” or “buzz”) if it is divisible by 15.
  - Prints the number otherwise.

```
def Fizzbuzz():
```

## Errors Galore

We wrote the function `floor_divide`, which divides a number, `big_num`, by another number, `small_num`, and then reports the answer rounded down to the nearest whole number.

Unfortunately, it has a lot of syntax errors and doesn't run. Identify and fix the syntax errors in the code below:

```
def floor_divide(big_num, small_num):
    if small_num = 0:
        return You cannot divide by zero!
    current_num = small_num
    num times = 0
    while current_num <= big_num
        current_num += small_num
        num times += 1
    report num times
```