Worksheet: Iteration Basics 1

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1a. Write a Python program that uses a `while` loop to print out a count down from `5 down` to `0`. The output can print each number on its own line, or print all numbers on a single line, separated by a space. Example output:

```
5 4 3 2 1 0
```

Once your code is working properly, copy it into the box below:

```
1 count = 5
2 while count >= 0:
3     print(count, end=" ")
4     count = count - 1
5 print()
```

1b. Complete the trace table for the above program. You may not need all the rows provided.

number	condition	Action
5	True	print 5, then number is set to 4
4	True	print 4, then number is set to 3
3	True	print 3, then number is set to 2
2	True	print 2, then number is set to 1
1	True	print 1, then number is set to 0
0	True	print 0, then number is set to -1
-1	False	loop ends.

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2a. Write a program that:

- repeatedly prompts the user to enter an integer
- stores each entered number in a list
- stops the input of numbers when the user enters the number 0 (zero)
- prints the resulting list
- prints the sum of the numbers in the list

For example:

```
Enter the next number for the list: 5
Enter the next number for the list: 3
Enter the next number for the list: 1
Enter the next number for the list: 0
[5, 3, 1]
Sum: 9
```

Once your code is working properly, copy it into the box below:

```
numbers = []
while True:
    i = int(input("Enter the next number for the list: "))
    if i == 0:
        break;
    numbers.append(i)
print(numbers)
print("Sum:", sum(numbers))
```