Name:_

_____ Partner: Python Activity 63: Java – Loops

Java is *programming language* that shares some commonalities with Python. Examing *control structures* such as loops in Java and Python delineate which concepts we've learned are specific to Python, and which are more general to computer science and computational thinking! It also allows us to review what we learned about Python loops!

Learning Objectives

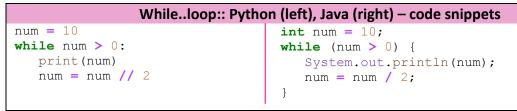
Students will be able to: *Content:*

- Predict what Java code with *while..loops* and *for..loops* will do
- Describe the differences in syntax between Python & Java *sentinal* and *count controlled loops Process:*
- Write Java code equivalents of Python code using *while..loops* and *for..loops* **Prior Knowledge**
- Python concepts: Python, loops, Java data types, Java conditionals

Critical Thinking Questions:

SENTINAL-CONTROLLED LOOPS

- 1. The table below shows the Python and Java versions of a *while loops*:
 - Circle where the Java while..loop syntax differs from the Python while..loop syntax.



O How does the *syntax* for *while..loops* differ in Python and Java?

COUNT LOOPS

2. The table below shows the Python and Java versions of a *for..each loop*: Circle where the *Java for..each loop syntax* differs from the Python for..loop syntax.

Foreach loop:: Python (left), Java (right) – code snippets	
word = "Williams"	<pre>String word = "Williams";</pre>
<pre>for char in word: print(char)</pre>	<pre>for (char c: word.toCharArray()) { System.out.println(c);</pre>
	}

3. The table below shows the Python and Java versions of a *for..loop*: Circle where the *Java for..loop syntax* differs from the Python for..loop syntax.

```
For.loop:: Python (left), Java (right) - code snippetsword = "Williams"String word = "Williams";size = len(word)int size = word.length();for i in range(size):for (int i = 0; i < size; i++) {</td>print(word[i])System.out.println(word.charAt(i));
```

How does the syntax for for..loops differ in Python and Java?

Application Questions.

1. Write a Java program that does the equivalent of the following Python program:

public class IsEvenList {
public static void main(String args[]){