

AP Chapter 6 Worksheet 1 while Loop

Name _____

class hour _____

I. In the following program segments do:

- a) Show the memory simulation for the variable `count`
- b) Write the last value of `count` upon completion of the **while** loop
- c) Write the output

```
1) int count = 0;
   while (count < 3)
   {
       count++;
       System.out.print(count + " ");
   }
```

1a) Memory Simulation:

count
0

b) Last value of count: _____

c) Output: _____

```
2) int count = 0;
   while (count < 3)
   {
       System.out.print(count + " ");
       count++;
   }
```

2a) Memory Simulation:

count
0

b) Last value of count: _____

c) Output: _____

```
3) int count = 1;
   while (count < 3)
   {
       count++;
       System.out.print(count + " ");
   }
```

3a) Memory Simulation:

count
1

b) Last value of count: _____

c) Output: _____

```
4) int count = 1;
   while (count < 3)
   {
       System.out.print(count + " ");
       count++;
   }
```

4a) Memory Simulation:

count
1

b) Last value of count: _____

c) Output: _____

II. Answer the following showing the memory simulation:

1) What is the output of the following code fragment?

```
int limit, count;
limit = 8;
System.out.print("GR");
for (count = 10; count <= limit; count++)
    System.out.print("E");
System.out.print("NLEE");
```

1) _____
MEMORY:
count limit

2) What is the output of the following code fragment?

```
int limit, count;
limit = 10;
System.out.print("GR");
for (count = 8; count <= limit; count++)
    System.out.print("E");
System.out.print("NLEE");
```

2) _____
MEMORY:
count limit

3) What is the output of the following code fragment?

```
int total = 0;
int count = 2;
for ( ; count <= 5; count++)
    total = total + 2 * count;
System.out.print(total);
```

3) _____
MEMORY:
count total

4) What is the output of the following code fragment?

```
for (count = 1; count > 4; count++)
    System.out.print(count + " ");
System.out.println("End");
```

4) _____
MEMORY:
count

5) Write the output of the following code fragment.

```
System.out.print("Hello ");
for (count = 1; count <= 3; count++); // Note the semicolon!
    System.out.print("Hi ");
System.out.print("Bye");
```

MEMORY:
count

5) _____