POGIL Worksheet — Loops in Java

Part A — Concept Exploration

Q1. A loop is used to:

A) Avoid using methods

 B) Repeat actions while a condition is true

C) Store multiple values

D) Stop a program immediately

Q2. The keyword while checks the condition:

A) Before entering the loop

B) After executing the loop body

C) Randomly during execution

 D) Only once

Q3. The do...while loop differs from while because it:

A) Never runs the body

 B) Runs the body at least once

C) Has no condition

D) Is used only with arrays

Q4. What will the following code print?

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

Q5. Which loop is best when you know exactly how many times to repeat?

A) while

 B) for

C) do...while

D) Infinite loop

Q6. In this code, what happens?

```
int x = 5;
while (x > 0) {
    System.out.println(x);
}
```

Q7. What does break do inside a loop?

 A) Ends the loop immediately

B) Skips to the next iteration

C) Restarts the loop

D) Does nothing

Q8. What does continue do inside a loop? A) Ends the loop immediately B) Skips the rest of the loop body for this iteration C) Restarts the program D) Jumps to another loop **Answer:** B

Q9 . In a for loop header, which part runs only once?

A) Condition

B) Initialization

C) Update

D) All run every time

Part B — Short Coding Practice

C1. Write a while loop that prints the numbers 1 to 5.

C2. Write a for loop that prints even numbers from 2 to 10.

C3. Use a do...while loop to print "Hello" three times.

C5. Using a for loop, compute the sum of numbers from 1 to 10 and print the result.