

**AP Computer Science
Quiz
October 10, 2005**

«Number» «Name»	“On my Honor, I have neither given nor received unauthorized aid of any kind on this assignment.”
Name	Student signature

1. Insert a statement to terminate the loop when the end of input is reached.

```
boolean finished = false;
while(!finished)
{
    String input = in.next();
    if(input.equalsIgnoreCase("Q"))
        finished = true;
    else
    {
        double x = Double.parseDouble(input);
        data.add(x);
    }
}
```

2. Insert the missing statement in the following code fragment. Note that the loop exit condition is when the user enters a positive number.

```
double value;
do
{
    System.out.print("Please enter a positive number: ");
    value = in.nextDouble();
}
while (value <= 0);
```

Raw Score	Total Points	Percentage	Letter Grade	Grade Points

AP Computer Science

3. What is the value of x after the following nested loop? $1 + 5 + 12 + 22 = 40$

```
int x = 0;
for(int i = 0; i < 5; i++)
    for(int j = 0; j < i; j++)
        x = x + i + j;
```

4. How many times does the following loop execute? 100

5. What is the last value that is printed? $99 * 100 = 9900$

```
for (i = 0; i < 100; i++)
    System.out.println( i * 100 );
```

6. Insert the missing statement in the following code fragment.

```
int years = 0;
while(years < 20)
{
    years++;
    double interest = balance * rate / 100;
    balance = balance + interest;
}
```

7. Circle the statement that causes this code fragments to be considered bad style?

```
for(int i = 1; i <= years; i++)
{
    if(balance >= targetBalance)
        i = years + 1; // Do NOT change the value of i
                        // inside the for loop
    else
    {
        double interest = balance * rate / 100;
        balance = balance + interest;
    }
}
```

AP Computer Science

8. Name the three types of iterative loops that we have studied.

while

do or do-while

for

9. Which type of loop is guaranteed to execute at least once?

do or do-while

Why?

The condition is tested after the statement is executed, so the statement is executed at least once.

10. Write an iterative code fragment that will calculate the sum of the odd integers in the range from 0 to 100. Create and initialize a local variable named “sum”. Use the most appropriate type of loop.

```
int sum = 0;
for (int i = 1; i < 100; i = i + 2)
    sum = sum + 1;
```