

Module 2 Quiz: Recursion

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Due Sep 14 at 11:59pm **Points** 100 **Questions** 10
Available after Sep 1 at 12am **Time Limit** 30 Minutes
Allowed Attempts 3

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Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	21 minutes	100 out of 100

❗ Correct answers are hidden.

Score for this attempt: **100** out of 100

Submitted Sep 14 at 12:55pm

This attempt took 21 minutes.

Question 1

10 / 10 pts

Some loops in Java cannot be implemented recursively.

☐ True☒ False

Question 2

10 / 10 pts

The recursive call(s) to a method must be located outside the method body.



☐ True☒ False**Question 3****10 / 10 pts**

Recursive calls from method are not pushed on to the call stack.

☐ True☒ False**Question 4****10 / 10 pts**

Assuming that a Java program contains a method that calls itself recursively infinitely, running this Java program with a call to the recursive method will lead to a stack overflow exception.

☒ True☐ False**Question 5****10 / 10 pts**

Any recursive method can be implemented using an iterative approach (using loops).



☒ True☐ False**Question 6****10 / 10 pts**

```
public static long func1(int n) {  
    if (n == 2) return 0;  
    return n * func1(n-1);  
}
```

What does func1(5) return?

☐ 24☐ 30☒ 0☐ 60**Question 7****10 / 10 pts**

```
public static long func2(int n) {  
    if (n == 0) return 0;  
    if (n == 1) return 1;  
    return func2(n-1) + func2(n-2);  
}
```

What does func2(3) return?



☒ 2☐ 5☐ 0☐ 1**Question 8****10 / 10 pts**

```
public static long func2(int n) {  
    if (n == 1) return 0;  
    if (n == 0) return 1;  
    return func2(n-1) + func2(n-2);  
}
```

What does func2(5) return?

☐ 1☐ 2☒ 3☐ 0**Question 9****10 / 10 pts**

```
public static void func4(int n) {  
    System.out.print(n + " ");  
    if (n == 1) return;
```



```
if (n % 2 == 0) func4(n / 2);  
else func4(3*n + 1);  
}
```

What is the output for func4(5)?

☐ 6 3 10 5 16 8 4 2 1

☐ 4 2 1

☒ 5 16 8 4 2 1

☐ 5 8 5 4 2

Question 10

10 / 10 pts

```
public static void func4(int n) {  
    System.out.print(n + " ");  
    if (n == 1) return;  
    if (n % 2 == 0) func4(n / 2);  
    else func4(3*n + 1);  
}
```

What is the output for func4(4)?

☒ 4 2 1

☐ 6 3 10 5 16 8 4 2 1

☐ 5 16 8 4 2 1

☐ 5 8 5 4 2



Quiz Score: **100** out of 100

