Status	Finished
Started	Thursday, 3 October 2024, 10:50 PM
Completed	Thursday, 3 October 2024, 10:55 PM
Duration	5 mins 10 secs

Question **1**

Correct

Marked out of 5.00

Write a program that takes as parameter an integer n.

You have to print the number of zeros at the end of the factorial of n.

For example, 3! = 6. The number of zeros are 0. 5! = 120. The number of zeros at the end are 1.

Note: n! < 10^5

Example Input:

3

Output:

0

Example Input:

60

Output:

14

Example Input:

100

Output:

24

Example Input:

1024

Output:

253

For example:

Input	Result
3	0
60	14
100	24
1024	253

Answer: (penalty regime: 0 %)

Reset answer

```
import java.util.Scanner;
public class FactorialTrailingZeros {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
                int n = scanner.nextInt();
                System.out.println(countTrailingZeros(n));
                scanner.close();
    }
    public static int countTrailingZeros(int n) {
        int count = 0;
        for (int i = 5; n / i >= 1; i *= 5) {
            count += n / i;
        }
        return count;
    }
}

```

	Input	Expected	Got	
✓	3	0	0	✓
✓	60	14	14	✓
✓	100	24	24	✓
✓	1024	253	253	✓

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

You have recently seen a motivational sports movie and want to start exercising regularly. Your coach tells you that it is important to get up early in the morning to exercise. She sets up a schedule for you:

On weekdays (Monday - Friday), you have to get up at 5:00. On weekends (Saturday & Sunday), you can wake up at 6:00. However, if you are on vacation, then you can get up at 7:00 on weekdays and 9:00 on weekends.

Write a program to print the time you should get up.

Input Format

Input containing an integer and a boolean value.

The integer tells you the day it is (1-Sunday, 2-Monday, 3-Tuesday, 4-Wednesday, 5-Thursday, 6-Friday, 7-Saturday). The boolean is true if you are on vacation and false if you're not on vacation.

You have to print the time you should get up.

Example Input:

1 false

Output:

6:00

Example Input:

5 false

Output:

5:00

Example Input:

1 true

Output:

9:00

For example:

Input	Result
1 false	6:00
5 false	5:00
1 true	9:00

Answer: (penalty regime: 0 %)

```
import java.util.Scanner;
public class WakeUpTime {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int day = scanner.nextInt();
        boolean vacation = scanner.nextBoolean();
        String wakeUpTime = getWakeUpTime(day, vacation);
                System.out.println(wakeUpTime);
        scanner.close();
    }
    public static String getWakeUpTime(int day, boolean vacation) {
        String time;
        if (vacation) {
            if (day == 1 || day == 7) {
                time = "9:00";
            } else {
                time = "7:00";
            }
        } else {
            if (day == 1 || day == 7) {
                time = "6:00";
            } else {
                time = "5:00";
```

```
            }
        }
        return time;
    }
}
```

	Input	Expected	Got	
✓	1 false	6:00	6:00	✓
✓	5 false	5:00	5:00	✓
✓	1 true	9:00	9:00	✓

Passed all tests! ✓

Question **3**

Correct

Marked out of 5.00

Consider a sequence of the form 0, 1, 1, 2, 4, 7, 13, 24, 44, 81, 149...

Write a method program which takes as parameter an integer n and prints the nth term of the above sequence. The nth term will fit in an integer value.

Example Input:

5

Output:

4

Example Input:

8

Output:

24

Example Input:

11

Output:

149

For example:

Input	Result
5	4
8	24
11	149

Answer: (penalty regime: 0 %)

```
import java.util.Scanner;

public class CustomSequence {

    public static int findNthTerm(int n) {
        if (n == 0) return 0;
        if (n == 1 || n == 2) return 1;

        int a = 0, b = 1, c = 1, nthTerm = 0;

        for (int i = 4; i <= n; i++) {
            nthTerm = a + b + c;
            a = b;
            b = c;
            c = nthTerm;
        }

        return nthTerm;
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("");
        int n = sc.nextInt();

        System.out.println(findNthTerm(n));
        sc.close();
    }
}

```

	Input	Expected	Got	
✓	5	4	4	✓
✓	8	24	24	✓
✓	11	149	149	✓

Passed all tests! ✓

◄ Lab-02-MCQ

Jump to...

Lab-03-MCQ ►