Status	Finished
Started	Sunday, 6 October 2024, 12:27 PM
Completed	Monday, 7 October 2024, 8:15 PM
Duration	1 day 7 hours

Question **1**

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 Main{
    public static void main(String args[]){
        Scanner sc=new Scanner(System.in);
        int b=sc.nextInt();
        int s[]=new int[b];
        if(b>0)s[0]=0;
        if(b>1)s[1]=1;
        if(b>2)s[2]=1;
        if(b>3)s[3]=2;
        if(b>4)s[4]=4;
        for(int i=5;i<b;i++){
            s[i]=s[i-1]+s[i-2]+s[i-3];
        }
        System.out.print(s[b-1]);
    }
}
```

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

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

You and your friend are movie fans and want to predict if the movie is going to be a hit!

The movie's success formula depends on 2 parameters:

the acting power of the actor (range 0 to 10)

the critic's rating of the movie (range 0 to 10)

The movie is a hit if the acting power is excellent (more than 8) or the rating is excellent (more than 8). This holds true except if either the acting power is poor (less than 2) or rating is poor (less than 2), then the movie is a flop. Otherwise the movie is average.

Write a program that takes 2 integers:

the first integer is the acting power

second integer is the critic's rating.

You have to print Yes if the movie is a hit, Maybe if the movie is average and No if the movie is flop.

Example input:

9 5

Output:

Yes

Example input:

1 9

Output:

No

Example input:

6 4

Output:

Maybe

For example:

Input	Result
9 5	Yes
1 9	No
6 4	Maybe

Answer: (penalty regime: 0 %)

```
import java.util.Scanner;
public class MovieSuccessPredictor {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int actingPower = sc.nextInt();
        int criticsRating = sc.nextInt();
        if (actingPower > 8 || criticsRating > 8) {

            if (actingPower < 2 || criticsRating < 2) {

                System.out.println("No");
            } else {

                System.out.println("Yes");
            }
```

```
        } else {

            System.out.println("Maybe");
        }

        sc.close();
    }
}
```

	Input	Expected	Got	
✓	9 5	Yes	Yes	✓
✓	1 9	No	No	✓
✓	6 4	Maybe	Maybe	✓

Passed all tests! ✓

Question **3**

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 sc = new Scanner(System.in);
        int n = sc.nextInt();
        int count = 0;
        for (int i = 5; n / i >= 1; i *= 5) {
            count += n / i;
        }
        System.out.println(count);
        sc.close();
    }
}
```

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

Passed all tests! ✓

◄ Lab-02-MCQ

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Lab-03-MCQ ►