

GE23131-Programming Using C-2024

Quiz navigation

1

2

3

Show one page at a time

Finish review

Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Tuesday, 26 November 2024, 9:06 AM
Duration	27 days 8 hours

Question 1

Correct

Marked out of 3.00

Flag question

Alice and Bob are playing a game called "Stone Game". Stone game is a two-player game. Let's say there are N stones. The player can remove either one stone or four stones. The player who picks the last stone, wins. Alice is always the one to make the first move. Your task is to find out whether Alice can win, if both players play optimally.

Input Format

First line starts with T, which is the number of test cases. Each test case will contain N number of stones.

Output Format

Print "Yes" in the case Alice wins, else print "No".

Constraints

$1 \leq T \leq 1000$

$1 \leq N \leq 10000$

Sample Input and Output

Input

3
1
6
7

Output

Yes
Yes
No

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2
3
4 int main()
5 {
6     int t,n;
7     scanf("%d",&t);
8
9     while(t>0)
10 {
```

REC-CIS

```

13     k=n/4;
14     n=n%4;
15     if(((k%2==0)&&(n%2==1) ) || ((k%2==1)&&(n%2==0)))
16     {
17         printf("Yes\n");
18     }
19     else{
20         printf("No\n");
21     }
22     t--;
23 }
24
25 }

```

	Input	Expected	Got	
	3	Yes	Yes	
	1	Yes	Yes	
	6	No	No	
	7			

Passed all tests!

Question **2**

Correct

Marked out of 5.00

[Flag question](#)

You are designing a poster which prints out numbers with a unique style applied to each of the closed paths or holes present in a given number.

The number of holes that each of the digits from 0 to 9 have are equal to the number of closed

1, 2, 3, 5, and 7 = 0 holes.

0, 4, 6, and 9 = 1 hole.

8 = 2 holes.

Given a number, you must determine the sum of the number of holes for all of its digits. For e

Complete the program, it must must return an integer denoting the total number of holes in

Constraints

$1 \leq \text{num} \leq 109$

Input Format For Custom Testing

There is one line of text containing a single integer num, the value to process.

Sample Input

630

Sample Output

2

Explanation

Add the holes count for each digit, 6, 3 and 0. Return $1 + 0 + 1 = 2$.

REC-CIS

Sample Input

1288

Sample Output

4

Explanation

Add the holes count for each digit, 1, 2, 8, 8. Return $0 + 0 + 2 + 2 = 4$.

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2
3 int main()
4 {
5     int n, h=0;
6     scanf("%d", &n);
7     while(n>0)
8     {
9         int d;
10        d=n%10;
11        if(d==0 || d==4 || d==6 || d==9)
12            h=h+1;
13        else if(d==8)
14            h=h+2;
15        else if(d==1 || d==2 || d==3 || d==5 || d==7)
16            h=h+0;
17
18        n=n/10;
19    }
20    printf("%d",h);
21
22
23 }
```

	Input	Expected	Got	
	630	2	2	
	1288	4	4	

Passed all tests!

Question **3**

Correct

Marked out of
7.00

Flag question

The problem solvers have found a new Island for coding and named it as Philaland. These smart people have found it easier by distributing various coins with different values. Manish has categorized items at the Island starting from \$1 till the maximum price of the item present on Island, then we can prove his point.

Let's suppose the maximum price of an item is 5\$ then we can make coins of {\$1, \$2, \$3, \$4, \$5}.

Now Manisha, being a keen observer suggested that we could actually minimize the number of coins required for any item. For example, for an item of \$6, the distribution { \$1, \$2, \$3}. According to him any item can be purchased one time ranging from \$1 to \$5. Your task is to help Manisha come up with a minimum number of denominations for any item.

Input Format

REC-CIS

Output Format

Print a single line denoting the minimum number of denominations of coins required.

Constraints $1 \leq T \leq 100$ $1 \leq N \leq 5000$

Refer the sample output for formatting

Sample Input 1:

10

Sample Output 1:

4

Sample Input 2:

5

Sample Output 2:

3

Explanation:

For test case 1, $N=10$.

According to Manish $\{\$1, \$2, \$3, \dots \$10\}$ must be distributed.

But as per Manisha only $\{\$1, \$2, \$3, \$4\}$ coins are enough to purchase any item ranging from denominations could also be $\{\$1, \$2, \$3, \$5\}$. Hence answer is still 4.

For test case 2, $N=5$.

According to Manish $\{\$1, \$2, \$3, \$4, \$5\}$ must be distributed.

But as per Manisha only $\{\$1, \$2, \$3\}$ coins are enough to purchase any item ranging from $\$1$ to $\$5$. Hence answer is still 3.

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2
3 int main()
4 {
5     int n, ct=0, den=1;
6     scanf("%d", &n);
7     while(den<=n)
8     {
9         ct++;
```

REC-CIS

13 }

	Input	Expected	Got	
	10	4	4	
	5	3	3	
	20	5	5	
	500	9	9	
	1000	10	10	

Passed all tests!