16/11/2017 HackerRank



♠ Practice

() Compete



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Dashboard > Data Structures > Queues > Down to Zero II

Down to Zero II ■



Problem

Submissions

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Discussions

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You are given Q queries. Each query consists of a single number N. You can perform any of the f 2 operations on N in each move:

1: If we take 2 integers a and b where $N=a\times b(a\neq 1,b\neq 1)$, then we can change N=max(a,b)

2: Decrease the value of ${\it N}$ by ${\it 1}$.

Determine the minimum number of moves required to reduce the value of $oldsymbol{N}$ to $oldsymbol{0}$.

Input Format

The first line contains the integer Q.

The next $oldsymbol{Q}$ lines each contain an integer, $oldsymbol{N}$.

Constraints

$$1 \le Q \le 10^3$$

$$0 \leq N \leq 10^6$$

Output Format

Output Q lines. Each line containing the minimum number of moves required to reduce the value of N to 0.

Sample Input

2

3 4

Sample Output

3

Explanation

For test case 1, We only have one option that gives the minimum number of moves.

Follow 3 -> 2 -> 1 -> 0. Hence, 3 moves.

For the case 2, we can either go $4 \rightarrow 3 \rightarrow 2 \rightarrow 1 \rightarrow 0$ or $4 \rightarrow 2 \rightarrow 1 \rightarrow 0$. The 2nd option is more optimal. Hence, 3 moves.

f ⊌ in

Submissions: 4245

Max Score:40 Difficulty: Medium

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```
Java 7
  Current Buffer (saved locally, editable) & 🗘
 1 ▼ import java.io.*;
 2 import java.util.*;
 3 import java.text.*;
    import java.math.*;
    import java.util.regex.*;
 7 ▼ public class Solution {
 8
 9 ▼
         public static void main(String[] args) {
10
             Scanner in = new Scanner(System.in);
11
             int Q = in.nextInt();
             for(int a0 = 0; a0 < Q; a0++){
12 ▼
                 int N = in.nextInt();
13
14
15
         }
16
    }
17
                                                                                                                     Line: 1 Col: 1
                      Test against custom input
                                                                                                         Run Code
                                                                                                                      Submit Code
1 Upload Code as File
```

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