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Down to Zero II

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Problem

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Status: Processing



Test Case #0



Test Case #1



Test Case #2



Test Case #3



Test Case #4



Test Case #5



Test Case #6



Test Case #7



Test Case #8



Test Case #9



Test Case #10



Test Case #11



Test Case #12



Test Case #13

Submitted Code

Language: C++

Open in editor

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```
1 #include <bits/stdc++.h>
2 #include <queue>
3 #include <unordered_map>
4
5 using namespace std;
6 int testCase(int n) {
7     if (n == 0) {
8         return 0;
9     }
10
11     priority_queue<int, vector<int>, greater<int>> pq;
12     unordered_map<int, int> moves;
13
14     pq.push(n);
15     moves.insert(make_pair(n, 0));
16
17     int minMoves = 1e9;
18     while (!pq.empty())
19     {
20         int x = pq.top();
21         int m = moves.find(x)->second;
22         pq.pop();
23
24         if (x > 0 && m + 1 < minMoves) {
25             auto it = moves.insert(make_pair(x - 1, 1e9)).first;
26             if (it->second > m + 1) {
27                 it->second = m + 1;
28                 pq.push(x - 1);
29                 if (x - 1 == 0) {
30                     minMoves = it->second;
31                 }
32             }
33             for (int k = (int)floor(sqrt(x)); k > 1; k--)
34             {
```

```
35         if (x % k == 0)
36         {
37             int factor = x / k;
38             auto it2 = moves.insert(make_pair(factor, 1e9)).first;
39             if (it2->second > m + 1)
40             {
41                 it2->second = m + 1;
42                 pq.push(factor);
43             }
44         }
45     }
46 }
47 }
48
49 return minMoves;
50 }
51
52 int main() {
53     int q;
54     cin >> q;
55
56     for (int i = 0; i < q; i++) {
57         int n;
58         cin >> n;
59         cout << testCase(n) << endl;
60     }
61
62     return 0;
63 }
```