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# Devon's Special Number

Problem

Submissions

Leaderboard

Discussions

Devon is playing a game where he needs to find whether a number is a special number or not. Only one operation can be done to the number and that is to deduct the value of the sum of its digits from the number and then this value (number - sum of digits in the number) becomes the new number. This operation is to be done until the number reaches the value 0. If this operation is repeated less than 5 times before the number reaches 0 then the number is deemed 'Special'.

Help Devon to find his answer using coding.

## Input Format

The first line contains the number of test cases. The next 'n' line contains one integer to find out if it is Special or not.

## Constraints

 $0 \leq n \leq 10^4$ 

## Output Format

The output will be of n lines with two integers - first one indicating the number of times the operation was performed on the number. The second contains a single digit - ie: 1: if the number is Special; 0: if the number is not special.

## Sample Input 0

```
2
51
11
```

## Sample Output 0

```
6 0
2 1
```

## Explanation 0

Here there are 2 test cases. Case 1: 51

1. step 1:  $51 - (5 + 1) = 45$
2. step 2:  $45 - (4 + 5) = 36$
3. step 3:  $36 - (3 + 6) = 27$
4. step 4:  $27 - (2 + 7) = 18$
5. step 5:  $18 - (1 + 8) = 9$
6. step 6:  $9 - 9 = 0$

Therefore the operation happens 6 times and so the output is 6 0(0 indicates that the number is not special )

case 2: 11

1. step 1:11-(1+1)=9

2. step 2:9-9=0

Therefore since the operation happens only 2 times the output is 2 1(1 indicates that the number is special)

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Contest ends in 2 hours

Submissions: 20

Max Score: 100

Difficulty: Easy

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☆☆☆☆☆

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C++14

```
1 #include <map>
2 #include <set>
3 #include <list>
4 #include <cmath>
5 #include <ctime>
6 #include <deque>
7 #include <queue>
8 #include <stack>
9 #include <string>
10 #include <bitset>
11 #include <cstdio>
12 #include <limits>
13 #include <vector>
14 #include <climits>
15 #include <cstring>
16 #include <cstdlib>
17 #include <fstream>
18 #include <numeric>
19 #include <sstream>
20 #include <iostream>
21 #include <algorithm>
22 #include <unordered_map>
23
24 using namespace std;
25 int main() {
26     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
27     return 0;
28 }
```

Line: 1 Col: 1

 [Upload Code as File](#) ☐ [Test against custom input](#)

Run Code

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