H: Corrupted Gradebook

A gradebook has been corrupted so that the columns have been removed. Each student's record simply contains a single string of digits. Knowing that the string of digits must have come from n different assignments (each with a possible integer grade between 0 and 100, inclusive), parse the string so that the average of the n grades is maximized.

Input

Input may consist of multiple cases, with each having a one line description. The line will contain an integer from 1 to 25 representing the number of grades. After some white space there will be a string of digits. This is the string to parse into the (optimal) original grades. The last case is followed by a line with two 0's (zeroes).

When correctly parsed, none of the grades will have leading 0's (zeroes), though individual grades may have value of 0, each shown simply as '0'.

Output

For each case, display the case number followed by the optimal average grade, rounded to the nearest integer. Format as in the sample.

Sample Input

```
2   835
2   100
1   100
0   0
```

Sample Output

```
Case 1: 44
Case 2: 5
Case 3: 100
```