4269 A Simple Game

Alice and Bob are playing a simple game. They have N integer numbers and a target number T in common. Either of them independently and randomly picks a number from the N numbers. They win the game if the product of the two picked numbers is strictly greater than the target number T. You are to calculate the probability that they will win. Assume that each number is picked with the same probability.

Input

The input consists of multiple test cases. Each test case consists of two lines.

The first line contains two integers N ($1 \leq N \leq 30,000$) and T ($-10^9 \leq T \leq 10^9$).

The second line contains N integers numbers that Alice and Bob have, each of which will be between $-30,000$ and $30,000$, inclusive. The last test case is followed by a line containing two zeros.

Output

For each test case, print a line containing the test case number (beginning with 1) followed by the probability of which Alice and Bob will win the game. The probability is printed as a fraction number formatted as 'a/b', where the greatest common divisor of a and b must be 1.

Sample Input

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2 0
2 -9
4 5
1 -4 3 -2
0 0
```

Sample Output

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Case 1: 1/2
Case 2: 1/4
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