

Problem C

Lynn's Fishing Luck

Time limit: 3 seconds

Memory limit: 1024 megabytes

Problem Description

Lynn is taking a break from farming carrots to play the fishing mini-game in her favorite simulation game. In this pond, fish come in various colors (e.g., Gold, Purple, Blue, Silver). Lynn recently unlocked a legendary tool: the “Master Net”. This net allows her to catch exactly K fish from the pond at once (randomly, without replacement).

Wenci, watching her play, analyzes the pond’s data. She finds that there are N different colors of fish.

Lynn is about to cast her Master Net. She is curious about the odds of getting a “Pure Catch” – that is, what is the probability that ALL K caught fish have the SAME color?

Wenci adjusts her glasses and says, “Easy. I can determine that using combinations.”

Please help Wenci write a program that determine this probability and outputs it as an irreducible fraction (simplest form).

Input Format

The input consists of multiple test cases until EOF. For each test case, the first line contains two integers N and K representing the number of colors of fish and the number of fish caught at once. The second line contains N integers $color_1, color_2, \dots, color_N$, which represent the numbers of fish with color $color_i$ ($1 \leq i \leq N$).

Output Format

For each test case, output the probability in the format ‘numerator/denominator’. The fraction must be in its simplest form (irreducible). If the probability is an integer (e.g., 0 or 1), output the integer directly.

Technical Specification

- $1 \leq N \leq 100$
- $2 \leq K \leq 5$
- $1 \leq color_i \leq 1,000, 1 \leq i \leq N$
- The total number of fish in the pond must at least K .

Sample Input 1

2 3
3 3

Sample Output 1

1/10
0

3 3
2 2 2
1 4
10

1