

OR

Given an array of N integers $A_1, A_2, A_3 \dots A_N$. If you randomly choose two indexes i, j such that $1 \leq i < j \leq N$, what is the expected value of $A_i | A_j$?

Input

First line contains an integer T , the number of test cases. Each test case consists of two lines. First line denotes the size of array, N and second line contains N integers forming the array.

$$1 \leq T \leq 10$$

$$2 \leq N \leq 100,000$$

$$0 \leq A_i < 2^{31}$$

Output

For each test case, print the answer as an irreducible fraction. Follow the format of the sample output.

The fraction p/q (p and q are integers, and both $p \geq 0$ and $q > 0$ holds) is called irreducible, if there is no such integer $d > 1$ that divides both p and q separately.

Example

Input:

2

2

0 0

3

1 2 3

Output:

0/1

3/1