UVa Online Judge

12068 Harmonic Mean

The harmonic mean (H_N) of N numbers $a_1, a_2, a_3 \ldots a_{N-1}, a_N$ is defined as below:

$$H_N = \frac{N}{\frac{1}{a_1} + \frac{1}{a_2} + \frac{1}{a_3} + \ldots + \frac{1}{a_{N-1}} + \frac{1}{a_N}}$$

So the harmonic mean of four numbers a, b, c, d is defined as

$$H_4 = \frac{4}{\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}}$$

In this problem your job is very simple: given N $(0 < N < 9)$ integers you will have to find their harmonic mean.

Input

The first line of the input file contains an integer S $(0 < S < 501)$, which indicates how many sets of inputs are there. Each of the next S lines contains one set of input. The description of each set is given below:

Each set starts with an integer N $(0 < N < 9)$, which indicates how many numbers are there in this set. This number is followed by N integers $a_1, a_2, a_3 \ldots a_{N-1}, a_N$ $(0 < a_i < 101)$.

Output

For each set of input produce one line of output. This line contains the serial of output followed by two integers m and n separated by a front slash. These two numbers actually indicate that the harmonic mean of the given four numbers is $\frac{m}{n}$. You must ensure that $\gcd(m, n) = 1$ or in other words m and n must be relative prime. The value of m and n will fit into a 64-bit signed integer.

Sample Input

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2
4 1 2 3 4
4 2 2 3 1
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Sample Output

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Case 1: 48/25
Case 2: 12/7
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