Double Farmland

Filename: *doubleland*
Time limit: *10 seconds*

There are a pair of twins, Danny and Donny, in Fortunate Farmland who will be inheriting several farms from their parents in the near future. Since the twins and their parents truly believe in fairness, a requirement of the inheritance documents is that both twins receive sets of farms that have the same total value. One of the twins Danny, really covets a subset of the farms his parents own. Unfortunately, of all the possible distributions of the farms to the twins where the value of the two sets the farms have been split into are equal, the parents will simply choose of those splits at random. Danny knows the values of all of his parents' farms. Help him calculate the probability that he'll actually get all of the farms in his desired subset.

The Problem

Given the values of each of the farms that Danny or Donny will inherit, as well as a list of the farms that Danny desires, determine the probability that he'll receive each farm on his list, given that the parents will pick a distribution (at random) of the farms such that the sum of the values of Danny's farms equals the sum of the values of Donny's farms.

The Input

The first line of input will contain a single positive integer, n ($n \leq 30$), representing the number of twin inheritance scenarios to consider. The input for each scenario will follow. The first line of input for each scenario will start with a positive integer, f ($2 \leq f \leq 20$), representing the number of farms Danny and Donny's parents are bequeathing to them. The rest of the line will contain f space separated positive integers, $v_1, v_2, ..., v_f$, where v_i ($1 \leq v_i \leq 10^8$) represents the value of the i^{th} farm that will be given to Danny or Donny. It's guaranteed that there will be at least one way to split the farms into two sets of equal value. The second line of each scenario will start with a single positive integer, k ($k < f$), representing the number of farms that Danny desires. The following k space separated integers on the line, which will be in increasing order and all in between 1 and f, inclusive, will represent the farms that Danny desires.

The Output

For each twin scenario, output a fraction in lowest terms representing the probability that Danny will obtain all of the farms on his wish list.

Sample Input

```
3
4 8 10 6 4
1 3
7 1 2 3 4 5 6 7
2 3 7
10 15 15 15 10 10 5 8 8 13 1
2 1 10
```

Sample Output

```
1/2
1/8
1/8
```