Naive Chef

Problem Code: **NAICHEF**

All submissions for this problem are available.

All Submissions

Successful Submissions +

Read problems statements in Mandarin chinese, Russian and Vietnamese as well.

Once, after a stressful day, Chef decided to relax and visit a casino near his house to gamble. He feels lucky and he's going to bet almost all of his money.

The game Chef is going to play in the casino consists of tossing a die with N faces twice. There is a number written on each face of the die (these numbers are not necessarily distinct). In order to win, Chef must get the number A on the first toss and the number B on the second toss of the die.

The excited viewers want to know the probability that Chef will win the game. Can you help them find that number? Assume that Chef gets each face of the die with the same probability on each toss and that tosses are mutually independent.

Input

- The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.
- The first line of each test case contains three space-separated integers N, A and B.
- The second line contains N space-separated integers $x_1, x_2, \ldots, x_N$ denoting the numbers written on the faces of the die.

Output

For each test case, print a single line containing one real number — the probability that Chef will win. Your answer will be considered correct if its absolute error does not exceed 10^{-6}.

Constraints

- $1 \le T \le 70$
- $1 \le N \le 10^4$
- $1 \le x_i \le N$ for each valid i

Subtasks

Subtask #1 (20 points):

- $T \leq 10$
- $N \leq 100$

Subtask #2 (80 points): original constraints

Example Input

```
2
5 1 1
1 1 1 1 1
2 1 1
1 2
```

Example Output

```
1.0000000000
0.2500000000
```

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Tags:	adlet_zeineken, adlet_zeineken, cakewalk, june18, likecs, probability
Date Added:	21-05-2018
Time Limit:	0.5 secs
Source Limit:	50000 Bytes
Languages:	C, CPP14, JAVA, PYTH, PYTH 3.5, PYPY, CS2, PAS fpc, PAS gpc, RUBY, PHP, GO, NODEJS, HASK, rust, SCALA, swift, D, PERL, FORT, WSPC, ADA, CAML, ICK, BF, ASM, CLPS, PRLG, ICON, SCM qobi, PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, kotlin, PERL6, TEXT, SCM chicken, CLOJ, COB, FS

Comments

CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms**, **binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

Practice Section - A Place to hone your 'Computer Programming Skills'

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

Compete - Monthly Programming Contests and Cook-offs

Here is where you can show off your **computer programming skills**. Take part in our 10 day long monthly coding contest and the shorter format Cook-off **coding contest**. Put yourself up for recognition and win great prizes. Our **programming contests** have prizes worth up to INR 20,000 (for Indian Community), $700 (for Global Community) and lots more CodeChef goodies up for grabs.

Programming Tools	Practice Problems	Initiatives
Online IDE	Easy	Go for Gold
Upcoming Coding Contests	Medium	CodeChef for Schools
Contest Hosting	Hard	Campus Chapters
Problem Setting	Challenge	
CodeChef Tutorials	Peer	
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