

# Discords Dilemma

Discord is in trouble for causing discord, so he is trying to escape from Equestria. He's arrived at the port, and he doesn't care what boat he gets on, he just wants to get out. He can see the boat schedule, where he sees that  $N$  boats are arriving today,

boat 1 arrives any time within  $a_1$  minutes

boat 2 arrives any time within  $a_2$  minutes

...

boat  $N$  arrives any time within  $a_N$  minutes (uniform distribution)

Tell discord the expected number of minutes he needs to wait for a boat to arrive.

For some reason, you should be accurate to  $10^{-6}$  of a minute.

## Input Format:

$T$  (number of test cases)

$N_1$  (number of boats for test case 1)

$a_1 a_2 \dots a_N$

$N_2$

...

$N_T$

...

## Output Format:

answer1

answer2

...

answer $T$

## Limits:

$1 \leq T \leq 100$

$1 \leq N \leq 100$

$1 \leq a_i \leq 1000$

Also,  $N * \max\{a_i\} \leq 10000$

**Sample Input:**

```
4
1
5
3
49 50 51
3
50 50 50
3
2 7 19
```

**Sample Output:**

```
2.500000
12.495000
12.500000
0.874687
```

Note: Round however Java would round if you used the statement `System.out.printf("%.6f\n", answer);`