The Average - POJ 2833

https://vjudge.net/problem/POJ-2833

In a speech contest, when a contestant finishes his speech, the judges will then grade his performance. The staff remove the highest grade and the lowest grade and compute the average of the rest as the contestant's final grade. This is an easy problem because usually there are only several judges.

Let's consider a generalized form of the problem above. Given n positive integers, remove the greatest n_1 ones and the least $n_2$ones, and compute the average of the rest.

Input

The input consists of several test cases. Each test case consists two lines. The first line contains three integers n_1, n_2 and n ($1 \le n_1, n_2 \le 10, n_1 + n_2 < n \le 5{,}000{,}000$) separate by a single space. The second line contains n positive integers a_i ($1 \le a_i \le 10^8$ for all i s.t. $1 \le i \le n$) separated by a single space. The last test case is followed by three zeroes.

Output

For each test case, output the average rounded to six digits after decimal point in a separate line.

Sample Input

```
1 2 5
1 2 3 4 5
4 2 10
2121187 902 485 531 843 582 652 926 220 155
0 0 0
```

Sample Output

```
3.500000
562.500000
```

Hint

This problem has very large input data. *scanf* and *printf* are recommended for C++ I/O.

The memory limit might not allow you to store everything in the memory.