

## Problem D. Distressed Thief

There are  $n$  jewels numbered by integers from 1 to  $n$ . The  $i$ -th jewel has the value of  $c_i$ .

A thief is planning to steal some of the jewels. Since the thief wants to earn some money, the thief wants to steal *at least*  $p$  jewels. However, the thief has limited capacity, so the thief can steal *at most*  $q$  jewels. ( $1 \leq p \leq q \leq n$ ).

However, somehow weirdly, the thief is asked to steal the jewels that maximize the *average of values of jewels* (i.e. arithmetic mean of values of jewels) It was because someone wanted to raise the quality of stolen jewels.

Before stealing, the thief wants to know what the maximum possible average value is. Also, the thief wants to know the number of ways to steal jewels (order doesn't matter, just the set of jewels matter), to know how many options he or she could choose.

Given the values of jewels, write a program that calculates the values

### Input

Your input consists of an arbitrary number of records, but no more than 1,000.

Each input record consists of two lines. The first line contains three integers  $n$ ,  $p$  and  $q$  ( $1 \leq p \leq q \leq n \leq 50$ ). The second line contains  $n$  integers  $c_1, c_2, \dots, c_n$  ( $1 \leq c_i \leq 10^6$ ), each separated by a space.

The end of input is indicated by a line containing only the value  $-1$ .

### Output

For each input line, print a line that contains two numbers, separated by a space.

- The first number should be the maximum possible average of values of selected jewels. This would be considered correct if  $|(your\ answer) - (our\ answer)| \leq 10^{-4}$ .
- The second number should be the number of ways to steal jewels so that the average of values of selected jewels is maximized. Note, that order of stealing jewels doesn't matter, but only the set of selected jewels matter.

## Example

Standard input	Standard output
5 3 3 1 9 5 7 3 4 2 3 1 2 1 1 -1	7 1 1.5000 3

## Explanation of the example

First example: the thief is only allowed to steal 3 jewels, so the thief maximizes the average by choosing the three largest values: 9, 5 and 7.

## Time Limit

1 second.