Problem G
Group Testing

During the first outbreak of the COVID-19 pandemic, extensive population-wide testing proved to be one of the best strategy to control and prevent the outbreak. However, PCR testing costs both time and money. An effective way to speed up the process and to save our resources is to implement group testing (or pool testing) strategy.

In this method, instead of doing test for individuals, we mix the samples of p individuals and run the test. If the result is negative, we can safely conclude that all p individuals are negative. Otherwise, if the result is positive, individual testing is used to determine who has the virus.

In an area, there are n families indexed from 0 to $n-1$. The i-th family has a_i members. Each family will form a group. After running n tests for n groups, we have exactly k groups with positive results.

Your task is to calculate the minimum and maximum number of extra individual tests we have to do.

Input

- The first line contains 2 integers n and k. ($0 \le k \le n \le 1\,000$)
- The second line contains n integers $a_0, a_1, \cdots, a_{n-1}$. ($1 \le a_i \le 10$)

Output

You should print 2 integers, the minimum and maximum number of extra individual tests we have to do.

Explanation of the samples

- In the first sample, if the positive groups are 0 and 1, we have to do 5 more tests; if the positive group are 3 and 4, we have to do 11 more tests;
- In the second sample, if the positive group is 0, we don't need any individual tests because this group has only 1 member.

Sample Input 1	Sample Output 1
5 2 2 3 4 5 6	5 11

Sample Input 2	Sample Output 2
3 1 1 2 3	0 3