

Cats and Fish

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 1024 megabytes

There are many homeless cats in PKU campus. They are all happy because the students in the cat club of PKU take good care of them. Li lei is one of the members of the cat club. He loves those cats very much. Last week, he won a scholarship and he wanted to share his pleasure with cats. So he bought some really tasty fish to feed them, and watched them eating with great pleasure. At the same time, he found an interesting question:

There are m fish and n cats, and it takes c_i minutes for the i -th cat to eat out one fish. A cat starts to eat another fish (if it can get one) immediately after it has finished one fish. A cat never shares its fish with other cats. When there are not enough fish left, the cat which eats quicker has higher priority to get a fish than the cat which eats slower. All cats start eating at the same time. Li Lei wanted to know, after x minutes, how many fish would be left.

Input

The first line of the input contains three integers m , n , and x ($0 < m \leq 5\,000$, $1 \leq n \leq 100$, $0 \leq x \leq 1\,000$).

The second line contains n integers $c_1, c_2, \dots, c_n$, c_i means that it takes the i th cat c_i minutes to eat out a fish ($1 \leq c_i \leq 2\,000$).

Output

Output a single line contains two integers p and q , meaning that there are p complete fish(whole fish) and q incomplete fish left after x minutes.

Examples

standard input	standard output
2 1 1 1	1 0
8 3 5 1 3 4	0 1
4 5 1 5 4 3 2 1	0 3