73239. Upper bound -1?

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Given a sorted array and a target value, return the index if the target is found. If not, return the index where it would be if it were inserted in order.

You may assume no duplicates in the array.

Input

The first line contains two integers n, m ($1 \leqslant n \leqslant 10^5, 1 \leqslant m \leqslant 10^9$) — array size and target value. The next line contains n integers a_i ($1 \leqslant a_i \leqslant 10^9$) — elements of array.

Output

Single integer, answer of problem.

Examples

standard input	standard output
5 15 1 3 5 12 14	5
2 13 6 12	2
2 12 7 11	2
5 12 1 6 7 12 13	4
3 9 7 10 11	1