D. Valera and Fools

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

One fine morning, n fools lined up in a row. After that, they numbered each other with numbers from 1 to n, inclusive. Each fool got a unique number. The fools decided not to change their numbers before the end of the fun.

Every fool has exactly k bullets and a pistol. In addition, the fool number i has probability of p_i (in percent) that he kills the fool he shoots at.

The fools decided to have several rounds of the fun. Each round of the fun looks like this: each currently living fool shoots at another living fool with the smallest number (a fool is not stupid enough to shoot at himself). All shots of the round are perfomed at one time (simultaneously). If there is exactly one living fool, he does not shoot.

Let's define a *situation* as the set of numbers of all the living fools at the some time. We say that a situation is*possible* if for some integer number j $(0 \le j \le k)$ there is a nonzero probability that after j rounds of the fun this situation will occur.

Valera knows numbers $p_1, p_2, ..., p_n$ and k. Help Valera determine the number of distinct *possible situations*.

Input

The first line contains two integers n, k $(1 \le n, k \le 3000)$ — the initial number of fools and the number of bullets for each fool.

The second line contains n integers $p_1, p_2, ..., p_n$ $(0 \le p_i \le 100)$ — the given probabilities (in percent).

Output

Print a single number — the answer to the problem.

Examples

input

```
3 3
50 50 50
```

output

```
7
```

input

```
1 1
100
```

output

```
1
```

input

```
2 1
100 100
```

output

```
2
```

input

```
3 3
0 0 0
```

output

```
1
```

Note

In the first sample, any situation is possible, except for situation $\{1, 2\}$.

In the second sample there is exactly one fool, so he does not make shots.

In the third sample the possible situations are $\{1, 2\}$ (after zero rounds) and the "empty" situation $\{\}$ (after one round).

In the fourth sample, the only possible situation is $\{1, 2, 3\}$.